

06-16-2023 LETTING ITEM 034

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
VAR. 1	D4 ELECTRICAL 2023-1	VAR. *	22
ILLINOIS CONTRACT NO. 68H61			
* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD			

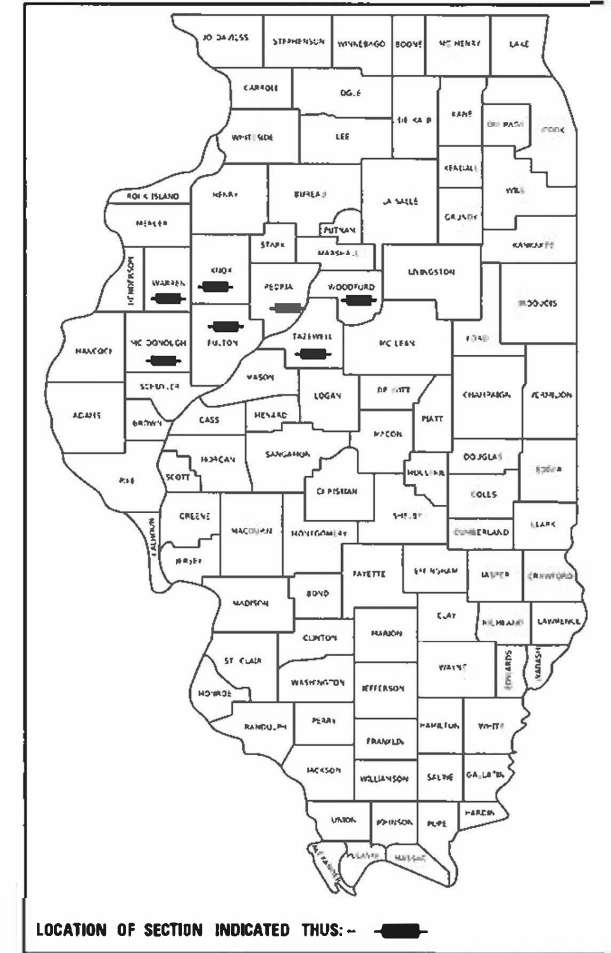
D-94-038-23

INDEX OF SHEETS:
SEE SHEET 2 FOR INDEX OF SHEETS

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
D4 ELECTRICAL 2023-1
VARIOUS COUNTIES

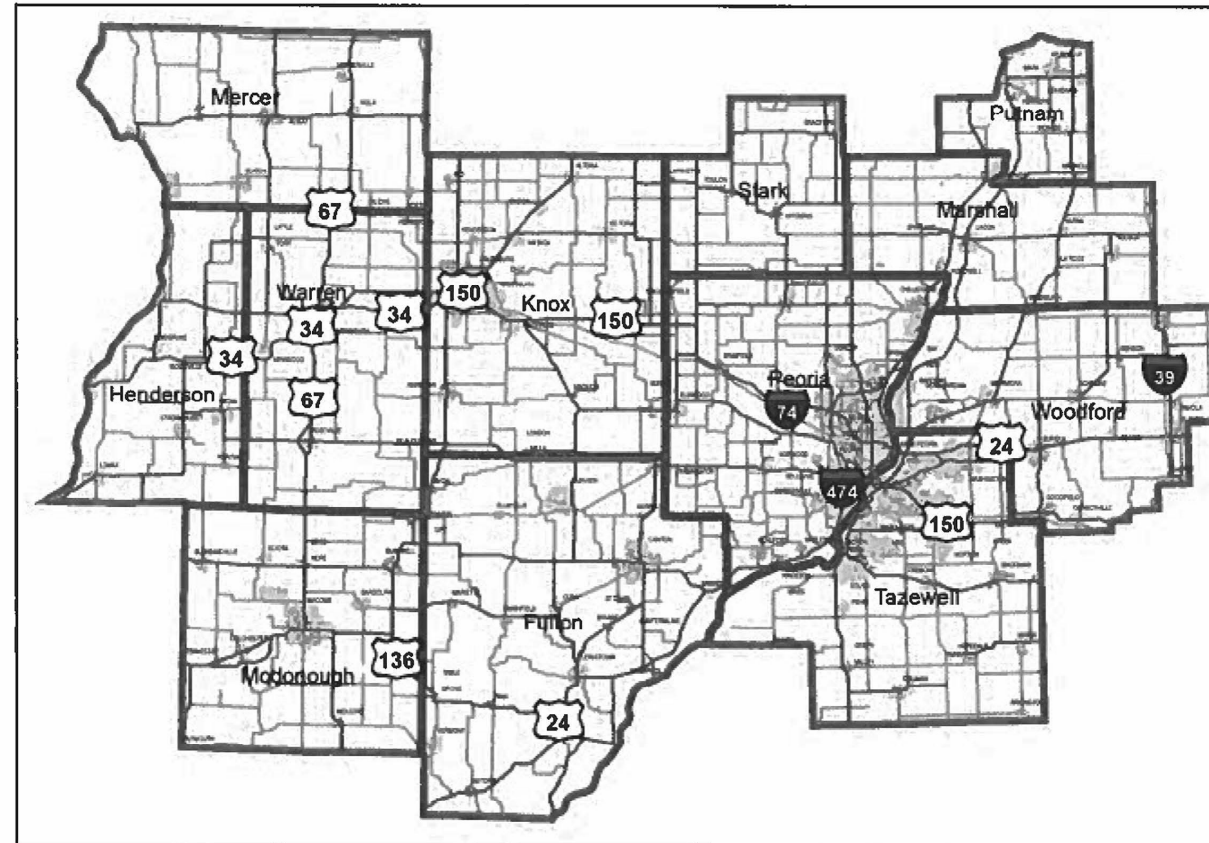
C-94-057-23



HIGHWAY STANDARDS:
SEE SHEET 2 FOR A LIST OF
APPLICABLE HIGHWAY STANDARDS

PROJECT DESCRIPTION:
TRAFFIC SIGNAL AND HIGHWAY LIGHTING IMPROVEMENTS
AT VARIOUS LOCATIONS IN FULTON, KNOX, MCDONOUGH,
PEORIA, TAZEWELL, WARREN AND WOODFORD COUNTIES.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811



PROJECT ENGINEER : TREVOR HANSON (309) 671-4474
PROJECT MANAGER : ERIC HOWALD (309) 671-4481

CATALOG NO. 036412-00D
CONTRACT NO. 68H61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 30 20 23
Russell L. Darnell
REGIONAL ENGINEER

May 12, 2023 [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 2023 [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

NO COMMITMENTS HAVE BEEN MADE IN CONJUNCTION WITH THIS PROJECT.

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21	LUMINAIRE PERFORMANCE TABLE
22	FLASHER CONTROLLER DETAILS

HIGHWAY STANDARDS	
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH & FOOT
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701400-11	APPROACH TO LANE CLOSURE, FREEWAY/ EXPRESSWAY
701406-13	LANE CLOSURE, FREEWAY/ EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
701422-10	LANE CLOSURE, MULTILANE, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701456-05	PARTIAL EXIT RAMP CLOSURE FREEWAY/ EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NON TRAVERSABLE MEDIAN
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
821101-02	LUMINAIRE WIRING IN POLE
838001-01	BREAKWAY DEVICES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

TRAFFIC SIGNAL CONSTRUCTION STAGING NOTES	
1.	THE CONTRACTOR WILL BE ALLOWED TO PLACE THE INTERSECTION INTO ALL-RED FLASH MODE TO FACILITATE THE INSTALLATION OF THE PROPOSED TRAFFIC SIGNAL MAST ARMS, POSTS, SIGNAL HEADS, ELECTRICAL CABLE AND OTHER COMPONENTS.
2.	THE CONTRACTOR SHALL FURNISH AND INSTALL A MINIMUM OF TWO STOP SIGNS PER APPROACH WHEN THE INTERSECTION IS OPERATING IN ALL-RED FLASH MODE. THE TRAFFIC SIGNALS MAY BE PLACED INTO ALL-RED FLASH MODE BETWEEN THE HOURS OF 8:30AM AND 3:00PM ONLY.
3.	THE CONTRACTOR SHALL RESTORE THE TRAFFIC SIGNALS TO NORMAL OPERATION AT ALL OTHER TIMES, UNLESS SPECIFICALLY DIRECTED OTHERWISE BY THE ENGINEER.
4.	THE CONTRACTOR WILL BE ALLOWED TO PLACE THE INTERSECTION INTO FLASH FOR A MAXIMUM OF FIVE DAYS PER EACH LOCATION.
5.	THE CONTRACTOR WILL BE ALLOWED TO MAKE TEMPORARY SPLICES AS NEEDED TO FACILITATE THE INSTALLATION OF THE PROPOSED TRAFFIC SIGNAL EQUIPMENT.
6.	ALL COSTS (LABOR, MATERIALS, AND EQUIPMENT) ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE CONTRACT BID PRICE. THERE WILL BE NO ADDITIONAL COMPENSATION FOR ITEMS REQUIRED TO IMPLEMENT STAGING, INCLUDING, BUT NOT LIMITED TO, TEMPORARY CABLE SPLICES, TEMPORARY TRAFFIC POSTS, AND PREMIUM TIME HOURS.

LEGEND	
	EX. TS CONTROLLER CABINET
	EX. DOUBLE HANDHOLE
	EX. HANDHOLE
	EX. SIGNAL HEAD (WITH BACKPLATE)
	EX. SIGNAL HEAD (WITHOUT BACKPLATE)
	EX. PEDESTRIAN SIGNAL HEAD
	EX. PEDESTRIAN PUSHBUTTON
	EX. MAST ARM ASSEMBLY AND POLE
	EX. COMBINATION MAST ARM ASSEMBLY AND POLE
	EX. LUMINAIRE
	EX. QUADRAPOLE DETECTOR
	EX. CONDUIT
	PROP. BACKPLATE ON EX. SIGNAL HEAD
	PROP. SIGNAL HEAD WITH BACKPLATE
	PROP. LED LUMINAIRE ON EXISTING LIGHT POLE (ALUMINUM)
	PROP. LED LUMINAIRE ON EXISTING WOOD POLE
	PROP. LIGHT POLE (GALVANIZED STEEL) AND COUPLINGS ON EXISTING METAL FOUNDATION

MODEL PATH: S:\CEN\WV\W000\DESIGN\AN\Hanson# 68H61_C4 Lighting 2023\CM Electrical 2023 (FINAL_03-31-23).dgn
FILE NAME: S:\CEN\WV\W000\DESIGN\AN\Hanson# 68H61_C4 Lighting 2023 (FINAL_03-31-23).dgn

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 28.0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**COMMITMENTS, INDEX OF SHEETS, HIGHWAY STANDARDS,
TRAFFIC SIGNAL CONSTRUCTION STAGING NOTES, & LEGEND**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	2
CONTRACT NO. 68H61				
ILLINOIS FED. AID PROJECT				

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

CONSTRUCTION NOTES

1.	THE LOCATION OF ALL UTILITIES AND PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE INSTALLATION OF ANY COMPONENTS.
2.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES AT HIS/HER OWN EXPENSE IF REQUIRED. THE CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO IDOT FACILITIES RESULTING FROM INACCURATE LOCATING.
3.	ELECTRICAL WORK SHALL CONFORM WITH NATIONAL, STATE, AND LOCAL CODES.
4.	THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE SLACK IN ACCORDANCE WITH ARTICLE 873.03.
5.	ELECTRICAL CABLE WILL BE MEASURED FOR PAYMENT IN ACCORDANCE WITH ARTICLE 873.04.
6.	THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BIDDING. THERE WILL BE NO ADDITIONAL COMPENSATION PAID FOR CLAIMS THAT ARISE FROM A FAILURE TO FULLY INVESTIGATE EXISTING FIELD CONDITIONS.
7.	ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.
8.	THE EXISTING TRAFFIC SIGNALS SHALL REMAIN IN OPERATION DURING THE CONSTRUCTION OF THE PROPOSED TRAFFIC SIGNALS.
9.	ANY MAINTENANCE OF EXISTING TRAFFIC SIGNALS AND HIGHWAY LIGHTING WILL BE CONSIDERED EXTRA WORK IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
10.	THE RED SECTIONS OF THE SIGNAL HEADS SHARING THE SAME MAST ARM SHALL BE LEVEL WITH ONE ANOTHER AND MAINTAIN A 16 FT. MINIMUM CLEARANCE FROM THE HIGHEST POINT OF THE ROADWAY TO BOTTOM OF THE SIGNAL BACKPLATE.
11.	ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" SINGLE LED LENSES.
12.	ALL TRAFFIC SIGNAL HEAD BRACKETS ARE TO BE GALVANIZED STEEL WITH A NATURAL FINISH.
13.	ALL TRAFFIC SIGNAL STRUCTURES SHALL BE BONDED IN ACCORDANCE WITH NEC REQUIREMENTS.
14.	REMOVAL OF EXISTING ITEMS (LIGHT POLES, BREAKAWAY COUPLINGS, LUMINAIRES, WIRING, ETC.) WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE UNIT BID PRICES FOR THE PROPOSED ITEMS. THE CONTRACTOR SHALL DISPOSE OF ALL ITEMS OFF OF THE RIGHT-OF-WAY.
15.	THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FUSEHOLDERS, FUSES, SURGE ARRESTORS, AND WIRING FOR EACH PROPOSED LUMINAIRE IN ACCORDANCE WITH HIGHWAY STANDARD 821101-02. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE OF THE PROPOSED LUMINAIRES.
16.	THE CONTRACTOR SHALL REMOVE THE HPS LAMPS FROM THE EXISTING FIXTURES PRIOR TO DISPOSAL. THE HPS LAMPS SHALL BE DISPOSED OF AT A CERTIFIED RECYCLING FACILITY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE OF THE PROPOSED LUMINAIRES.
17.	THE CONTRACTOR SHALL FURNISH AND INSTALL NEW BREAKWAY COUPLINGS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL FURNISH ALL HARDWARE AND OTHER ITEMS REQUIRED FOR INSTALLATION OF THE BREAKAWAY COUPLINGS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN."
18.	THE CONTRACTOR SHALL FURNISH AND INSTALL NEW STAINLESS STEEL OR PERFORATED ALUMINUM SCREENING AROUND THE PROPOSED LIGHT POLES. THE PROPOSED SCREEN SHALL BE SECURELY BANDED ON THE TOP AND BOTTOM OF THE BREAKAWAY COUPLINGS TO PREVENT RODENT ENTRY AND NO GAPS IN EXCESS OF 0.25 INCH WILL BE ALLOWED. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN."
19.	ALL EXISTING UNIT-DUCT, ELECTRICAL CABLING, LIGHTING CONTROLLERS, LIGHT POLE FOUNDATIONS, AND LIGHT POLES SHALL BE RE-USED WITH THE PROPOSED LIGHTING INSTALLATIONS AT US 34 & IL 94/ IL 116 INTERCHANGE, US 67 & IL 110/ IL 336 INTERCHANGE, AND US 136 & IL 110/ IL 336 INTERCHANGE.
20.	ALL EXISTING UNIT-DUCT, ELECTRICAL CABLING, LIGHTING CONTROLLERS, AND LIGHT POLE FOUNDATIONS SHALL BE RE-USED WITH THE PROPOSED LIGHTING INSTALLATION AT I-474 AT EXIT 15.
21.	THE CONTRACTOR SHALL VERIFY LUMINAIRE VOLTAGE AT ALL LOCATIONS PRIOR TO ORDERING MATERIALS.

MODEL Path: S:\CEN\WV\ORD\ESP\AN\Hanson# 68H61_C4 Lighting 2023\C4 Electrical 2023 (FINAL_03-31-23).dgn

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

USER NAME = Trevor.Hanson DESIGNED - DRAWN - PLOT SCALE = 28,0523 * / in. CHECKED - PLOT DATE = 3/31/2023 DATE - REVISED -	DESIGNED - REVISED - CHECKED - REVISED - DATE - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONSTRUCTION NOTES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			SCALE:	SHEET OF	SHEETS	STA. TO STA.	VAR.	D4 ELECTRICAL 2023-1	VAR. *
								CONTRACT NO. 68H61	
								ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QTY.	VARIOUS COUNTIES	VARIOUS COUNTIES	GERMANTOWN HILLS
				0021	0021	0021
				100% STATE	100% STATE	90% STATE
				0% COUNTY	0% COUNTY	10% CITY
				SIGNALS	LIGHTING	SIGNALS
				QTY.	QTY.	QTY.
67100100	MOBILIZATION	L SUM	1.0		0.8	0.2
* 72000100	SIGN PANEL - TYPE 1	SQ FT	20.0			20.0
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	112.0		112.0	
83060830	LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H., TENON MOUNT	EACH	6.0		6.0	
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	24.0		24.0	
85820200	FLASHER CONTROLLER, SPECIAL	EACH	2.0	2.0		
85820400	FLASHER CONTROLLER, SPECIAL, WITHOUT CABINET	EACH	16.0	16.0		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1710.0			1710.0
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4.0			4.0
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4.0			4.0
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	8.0			8.0
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1.0		0.8	0.2
X8210402	LUMINAIRE MOUNTING BRACKET - SPECIAL	EACH	76.0		76.0	
X8807670	SIGNAL HEAD, LED, RETROFIT	EACH	50.0	48.0		2.0
X8950212	MODIFY EXISTING CONTROLLER CABINET, SPECIAL	EACH	2.0			2.0

*= SPECIALTY ITEM

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

MODEL Path: S:\CEN\WV\W000\DESIGN\AN\Hanson# 68H61_C4 Lighting 2023\C4 Electrical 2023 (FINAL) 03-31-23.rvt

USER NAME = Trevor.Hanson	DESIGNED -	REVISED 03-16-22 TJH
DRAWN -	REVISIONS -	
PLOT SCALE = 28,0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	4
CONTRACT NO. 68H61			ILLINOIS FED. AID PROJECT	

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNIT	COUNTY		FULTON COUNTY		HENDERSON COUNTY	KNOX COUNTY	MCDONOUGH COUNTY		PEORIA COUNTY					TAZEWELL COUNTY					WARREN COUNTY		WOODFORD COUNTY				
		TOWNSHIP	CASS	VERMONT	BIGGSVILLE	HENDERSON	MACOMB	CHALMERS	EDELSTEIN	EDWARDS	PEORIA			AKRON	EAST PEORIA	GREEN VALLEY	GROVELAND	DEER CREEK	MACKINAW	PEKIN	MONMOUTH	ROSEVILLE	GERMANTOWN HILLS		BENSON	METAMORA
		LOCATION	IL 95 & MAIN ST.	US 136 & CH 13/ V.I.T. SCHOOL	US 34 & IL 94/ IL 116 INTERCHANGE	US 150 & HENDERSON RD. (KNOX HWY. 37)	US 67 & IL 110/ IL 336 INTERCHANGE	US 136 & IL 110/ IL 336 INTERCHANGE	IL 40 & IL 9C/ TRUITT RD.	IL 8 (SOUTHPORT RD.) & COTTONWOOD RD.	IL 8 (FARMINGTON RD.) & BRADLEY PARK CURVE	IL 40 (KNOXVILLE AVE.) & TERRACE LN.	FARMINGTON RD. & KICKAPOO CREEK RD.	IL 90 & IL 91	I-474 AT EXIT 15	IL 29 & TOBBOGAN RD.	IL 122 & SPRINGFIELD RD.	US 150 & DEE-MAC RD.	IL 9 & ORCHARD ST./ MACKINAW RD./ MINIER RD.	COURT ST. & ALLENTOWN RD.	US 34 & 11TH ST.	US 67 & IL 116 (PENN AVE.)	IL 116 & FANDEL RD.	IL 116 & ARBOR VITAE DR./ SCHMITT LN.	IL 116 & FANDEL RD. SCHOOL	IL 116 & IL 117 [WEST OF BENSON]
TOTAL QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.
MOBILIZATION	L SUM	1.0			0.2			0.2	0.2					0.2									0.1	0.1		
SIGN PANEL - TYPE 1	SQ FT	20.0																				10.0	10.0			
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	112.0			29.0			31.0	44.0					6.0				2.0								
LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H., TENON MOUNT	EACH	6.0												6.0												
BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	24.0												24.0												
FLASHER CONTROLLER, SPECIAL	EACH	2.0								2.0																
FLASHER CONTROLLER, SPECIAL, WITHOUT CABINET	EACH	16.0	1.0	1.0		1.0					1.0	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0			1.0	1.0
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1710.0																				746.0	964.0			
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4.0																				2.0	2.0			
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4.0																				2.0	2.0			
TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	8.0																				4.0	4.0			
TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1.0			0.2			0.2	0.2					0.2								0.1	0.1			
LUMINAIRE MOUNTING BRACKET - SPECIAL	EACH	76.0						29.0	40.0					6.0				1.0								
SIGNAL HEAD, LED, RETROFIT	EACH	50.0	2.0	3.0		4.0				4.0	2.0	2.0	1.0	6.0	4.0		4.0	2.0	2.0	1.0	1.0	4.0		2.0	2.0	4.0
MODIFY EXISTING CONTROLLER CABINET, SPECIAL	EACH	2.0																				1.0	1.0			

MODEL: D:\p4\h... FILE NAME: S:\CEN\W\W\ORD\ESP\AN\Hanson# 68H61_C4 Lighting_2023\C4 Electrical 2023 (FINAL_03-31-23).dgn

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 28,0523 * / in.	DRAWN -	REVISED -			VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	5
PLOT DATE = 3/31/2023	CHECKED -	REVISED -			CONTRACT NO. 68H61				
	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.

ILLINOIS FED. AID PROJECT

Flashing Beacon Schedule

Route 1	Route 2	Township	County	Existing Flasher Power Source	Description	Latitude, Longitude	SH LED RETROFIT	FL CONT SPL W/O CAB	FL CONT SPL	LUM LED RDWY H	LUMINAIRE MT BRKT SPL
							EACH	EACH	EACH	EACH	EACH
							QTY.	QTY.	QTY.	QTY.	QTY.
IL 116	IL 117 [West of Benson]	BENSON	WOODFORD	Hybrid	2 Red Stop Sign (Solar) + 2 Yellow Advanced Sign Post (AC)	40.853240, -89.142478	2.0 (2 YELLOW)	1.0			
IL 122	Springfield Rd.	DELAVAN	TAZEWELL	AC	2 Red Stop Sign Post	40.379376, -89.528586	2.0 (2 RED)	1.0			
IL 40	IL 90/Truitt Rd.	EDELSTEIN	PEORIA	AC	2 Red Stop Sign Post + 2 Yellow Advanced Sign Post	40.930279, -89.629405	4.0 (2 RED + 2 YELLOW)	1.0			
IL 8 (Southport Rd.)	Cottonwood Rd	EDWARDS	PEORIA	AC	2 Yellow Advanced Sign Post	40.745057, -89.769582	2.0 (2 YELLOW)		2.0*		
US 150	Henderson Rd. (Knox Hwy 37)	HENDERSON	KNOX	AC	2 Red Stop Sign Post + 2 Yellow Advanced Sign Post	41.020236, -90.382322	4.0 (2 RED + 2 YELLOW)	1.0			
IL 116	Fandel [West]	GERMANTOWN HILLS	WOODFORD	AC	1 Yellow School Sign Post	40.765983, -89.468795	1.0 (1 YELLOW)				
IL 116	Fandel [East]	GERMANTOWN HILLS	WOODFORD	AC	1 Yellow School Sign Post	40.767018, -89.465381	1.0 (1 YELLOW)				
IL 29	Tobbogan Rd.	GREEN VALLEY	TAZEWELL	AC	2 Red Stop Sign Post + 2 Yellow Advanced Sign Post	40.407181, -89.649898	4.0 (2 RED + 2 YELLOW)	1.0			
US 34	11th St [East of Intersection]	MONMOUTH	WARREN	AC	1 Yellow Advanced Sign Post	40.924401, -90.627999	1.0 (1 YELLOW)	1.0			
Court St.	Allentown Rd [West of Intersection]	PEKIN	TAZEWELL	AC	1 Yellow Advanced Sign Post	40.556117, -89.611434	1.0 (1 YELLOW)	1.0			
IL 8 (Farmington Rd.)	[Bradley Park Curve]	PEORIA	PEORIA	AC	2 Yellow Advanced Sign Post (Installed on same post)	40.702023, -89.621550	2.0 (2 YELLOW)	1.0			
IL 40 (Knoxville Ave.)	Terrace Lane	PEORIA	PEORIA	AC	1 Yellow Advanced Sign Post	40.733954, -89.593637	1.0 (1 YELLOW)	1.0			
Farmington Rd.	Kickapoo Creek Rd	PEORIA	PEORIA	Hybrid	2 Red Stop Sign Post (AC) + 8 Yellow Advanced Sign Post (4 AC + 4 Solar)	40.700902, -89.654711	6.0 (2 RED + 4 YELLOW)	1.0			
IL 90	IL 91 [East of Princeville]	AKRON	PEORIA	AC	1 Red Stop Sign Post + 3 Yellow Advanced Sign Post	40.927592, -89.677236	4.0 (1 RED + 3 YELLOW)	1.0			
IL 116 (CH 1400 N)	IL 117 (CH 1400 E) [West of Roanoke]	METAMORA	WOODFORD	AC	2 Red Stop Sign Post + 2 Yellow Advanced Sign Post	40.792584, -89.273658	4.0 (2 RED + 2 YELLOW)	1.0			
US 67	IL 116 (Penn Ave.) [West of Roseville]	ROSEVILLE	WARREN	AC	2 Red Stop Sign Post + 2 Yellow Advanced Sign Post	40.732638, -90.686427	4.0 (2 RED + 2 YELLOW)	1.0			
IL 95	Main St.	CASS	FULTON	AC	2 Red Stop Sign Post	40.480702, -90.291499	2.0 (2 RED)	1.0			
US 136	CH 13/ V.I.T. School	VERMONT	FULTON	AC	1 Red Stop Sign Post + 2 Yellow School Sign Post	40.356678, -90.421350	3.0 (1 RED + 2 YELLOW)	1.0			
US 150	Dee-Mac Rd.	DEER CREEK	TAZEWELL	Hybrid	2 Red Stop Sign Post (AC) + 4 Yellow Advanced Sign Post (Solar)	40.615247, -89.346469	2.0 (2 RED)	1.0			
IL 9	Orchard St./ Mackinaw Rd./ Minier Rd.	MACKINAW	TAZEWELL	AC	4 Red Mast Arm (Combination with 2 Luminaires)	40.529838, -89.357989				2.0	1.0

*At IL 8 (Southport Rd.) & Cottonwood Rd., the contractor shall furnish and install the proposed FLASHER CONTROLLER, SPECIAL below the existing service disconnect on the wood service pole at each flasher location.

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

MODEL Path: S:\CEN\W\WOOD\ESP\AN\Hanson# 68H61 CH Lighting 2023\CH Electrical 2023 (FINAL) 03-31-23.dgn

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 28,0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

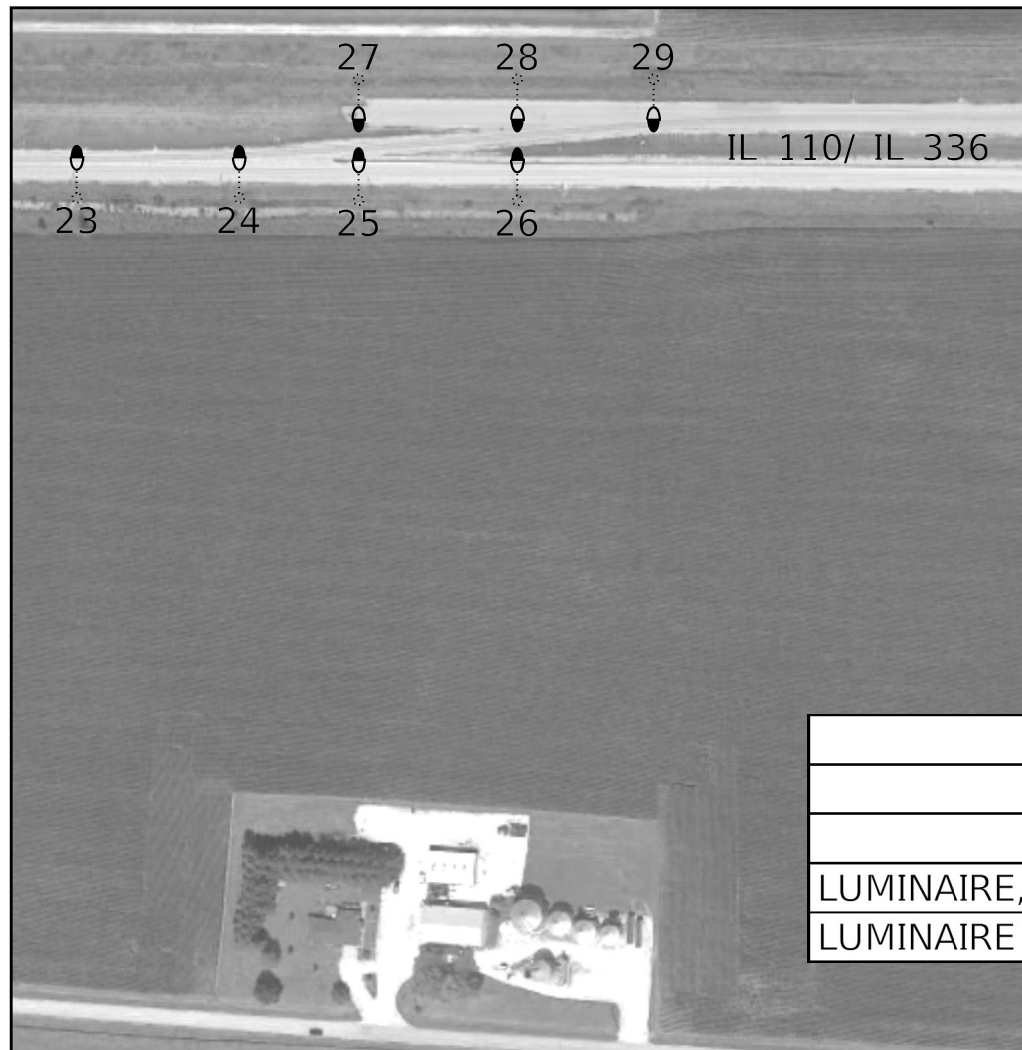
FLASHING BEACON SCHEDULE

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68H61	

NOTES:

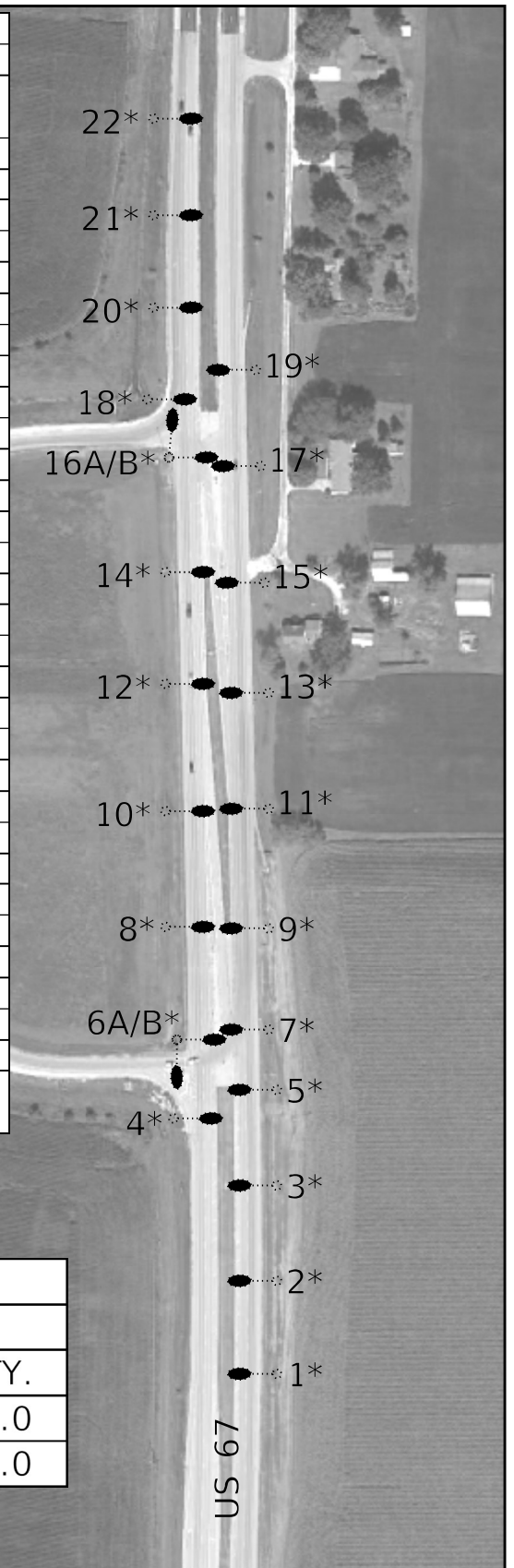
1. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FUSEHOLDERS, FUSES, SURGE ARRESTORS, AND WIRING FOR EACH PROPOSED LUMINAIRE IN ACCORDANCE WITH HIGHWAY STANDARD 821101-02. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE OF THE PROPOSED LUMINAIRES.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL HOUSE SIDE SHIELDS ON EACH PROPOSED LUMINAIRE FOR LIGHT POLES 1 - 22 TO LIMIT LIGHT TRESPASS ONTO NEARBY CULTIVATION FIELDS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE BID PRICE OF THE PROPOSED LUMINAIRES.
3. THE EXISTING LUMINAIRE VOLTAGE IS 480V.
4. THE CONTRACTOR SHALL VERIFY LUMINAIRE VOLTAGE PRIOR TO ORDERING MATERIALS.



LUMINAIRE SCHEDULE					
US 67 & IL 110/ IL 336 INTERCHANGE					
POLE NUMBER	EX. POLE TYPE	PROP. MOUNTING TYPE	MOUNTING HEIGHT (FT.)	LUM LED RDWY H (QTY.)	LUMINAIRE MT BRKT SPL (QTY.)
				EACH	EACH
1	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
2	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
3	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
4	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
5	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
6	GALVANIZED STEEL	TWIN TENON	45.0	2.0 *	1.0
7	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
8	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
9	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
10	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
11	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
12	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
13	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
14	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
15	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
16	GALVANIZED STEEL	TWIN TENON	45.0	2.0 *	1.0
17	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
18	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
19	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
20	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
21	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
22	GALVANIZED STEEL	TENON	45.0	1.0 *	1.0
23	WOOD	TENON	45.0	1.0	1.0
24	WOOD	TENON	45.0	1.0	1.0
25	WOOD	TENON	45.0	1.0	1.0
26	WOOD	TENON	45.0	1.0	1.0
27	WOOD	TENON	45.0	1.0	1.0
28	WOOD	TENON	45.0	1.0	1.0
29	WOOD	TENON	45.0	1.0	1.0

*THE CONTRACTOR SHALL FURNISH AND INSTALL HOUSE SIDE SHIELD ON EACH PROPOSED LUMINAIRE FOR LIGHT POLES 1 - 22.

BILL OF MATERIALS			
US 67 & IL 110/ IL 336 INTERCHANGE			
ITEM DESCRIPTION	UNIT	QTY.	
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	31.0	
LUMINAIRE MOUNTING BRACKET - SPECIAL	EACH	29.0	

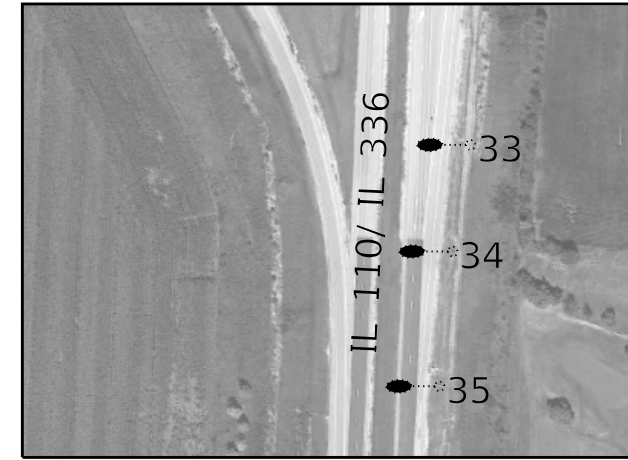


MODEL Path: S:\CEN\W\W\ORD\ESP\AN\Hanson# 68H61_C4 Lighting 2023\C4 Electrical 2023 (FINAL_03-31-23).dgn

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED LIGHTING PLANS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 28.0523 * / in.	DRAWN -	REVISED -		US 67 & IL 110/ IL 336 INTERCHANGE - MCDONOUGH COUNTY				VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	7
PLOT DATE = 3/31/2023	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 68H61	
	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								



LUMINAIRE SCHEDULE					
US 136 & IL 110/ IL 336 INTERCHANGE					
POLE NUMBER	EX. POLE TYPE	PROP. MOUNTING TYPE	MOUNTING HEIGHT (FT.)	LUM LED RDWY H (QTY.)	LUMINAIRE MT BRKT SPL (QTY.)
				EACH	EACH
1	GALVANIZED STEEL	TENON	45.0	1.0	1.0
2	GALVANIZED STEEL	TENON	45.0	1.0	1.0
3	GALVANIZED STEEL	TENON	45.0	1.0	1.0
4	GALVANIZED STEEL	TENON	45.0	1.0	1.0
5	GALVANIZED STEEL	TWIN TENON	45.0	2.0	1.0
6	GALVANIZED STEEL	TENON	45.0	1.0	1.0
7	GALVANIZED STEEL	TWIN TENON	45.0	2.0	1.0
8	GALVANIZED STEEL	TENON	45.0	1.0	1.0
9	GALVANIZED STEEL	TENON	45.0	1.0	1.0
10	GALVANIZED STEEL	TENON	45.0	1.0	1.0
11	GALVANIZED STEEL	TENON	45.0	1.0	1.0
12	GALVANIZED STEEL	TENON	45.0	1.0	1.0
13	GALVANIZED STEEL	TENON	45.0	1.0	1.0
14	GALVANIZED STEEL	TENON	45.0	1.0	1.0
15	GALVANIZED STEEL	TENON	45.0	1.0	1.0
16	GALVANIZED STEEL	TENON	45.0	1.0	1.0
17	GALVANIZED STEEL	TENON	45.0	1.0	1.0
18	GALVANIZED STEEL	TENON	45.0	1.0	1.0
19	GALVANIZED STEEL	TENON	45.0	1.0	1.0
21	GALVANIZED STEEL	TENON	45.0	1.0	1.0
22	GALVANIZED STEEL	TENON	45.0	1.0	1.0
23	GALVANIZED STEEL	TENON	45.0	1.0	1.0
24	GALVANIZED STEEL	TENON	45.0	1.0	1.0
25	GALVANIZED STEEL	TWIN TENON	45.0	2.0	1.0
26	GALVANIZED STEEL	TENON	45.0	1.0	1.0
27	GALVANIZED STEEL	TWIN TENON	45.0	2.0	1.0
28	GALVANIZED STEEL	TENON	45.0	1.0	1.0
29	GALVANIZED STEEL	TENON	45.0	1.0	1.0
30	GALVANIZED STEEL	TENON	45.0	1.0	1.0
31	GALVANIZED STEEL	TENON	45.0	1.0	1.0
32	GALVANIZED STEEL	TENON	45.0	1.0	1.0
33	GALVANIZED STEEL	TENON	45.0	1.0	1.0
34	GALVANIZED STEEL	TENON	45.0	1.0	1.0
35	GALVANIZED STEEL	TENON	45.0	1.0	1.0
36	WOOD	TENON	45.0	1.0	1.0
37	WOOD	TENON	45.0	1.0	1.0
38	WOOD	TENON	45.0	1.0	1.0
39	WOOD	TENON	45.0	1.0	1.0
40	WOOD	TENON	45.0	1.0	1.0
41	WOOD	TENON	45.0	1.0	1.0

BILL OF MATERIALS		
US 136 & IL 110/ IL 336 INTERCHANGE		
ITEM DESCRIPTION	UNIT	QTY.
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	44.0
LUMINAIRE MOUNTING BRACKET - SPECIAL	EACH	40.0

- NOTES:
- THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FUSEHOLDERS, FUSES, SURGE ARRESTORS, AND WIRING FOR EACH PROPOSED LUMINAIRE IN ACCORDANCE WITH HIGHWAY STANDARD 821101-02. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE OF THE PROPOSED LUMINAIRES.
 - THE EXISTING LUMINAIRE VOLTAGE IS 480V.
 - THE CONTRACTOR SHALL VERIFY LUMINAIRE VOLTAGE PRIOR TO ORDERING MATERIALS.

MODEL: D:\p\h\l...
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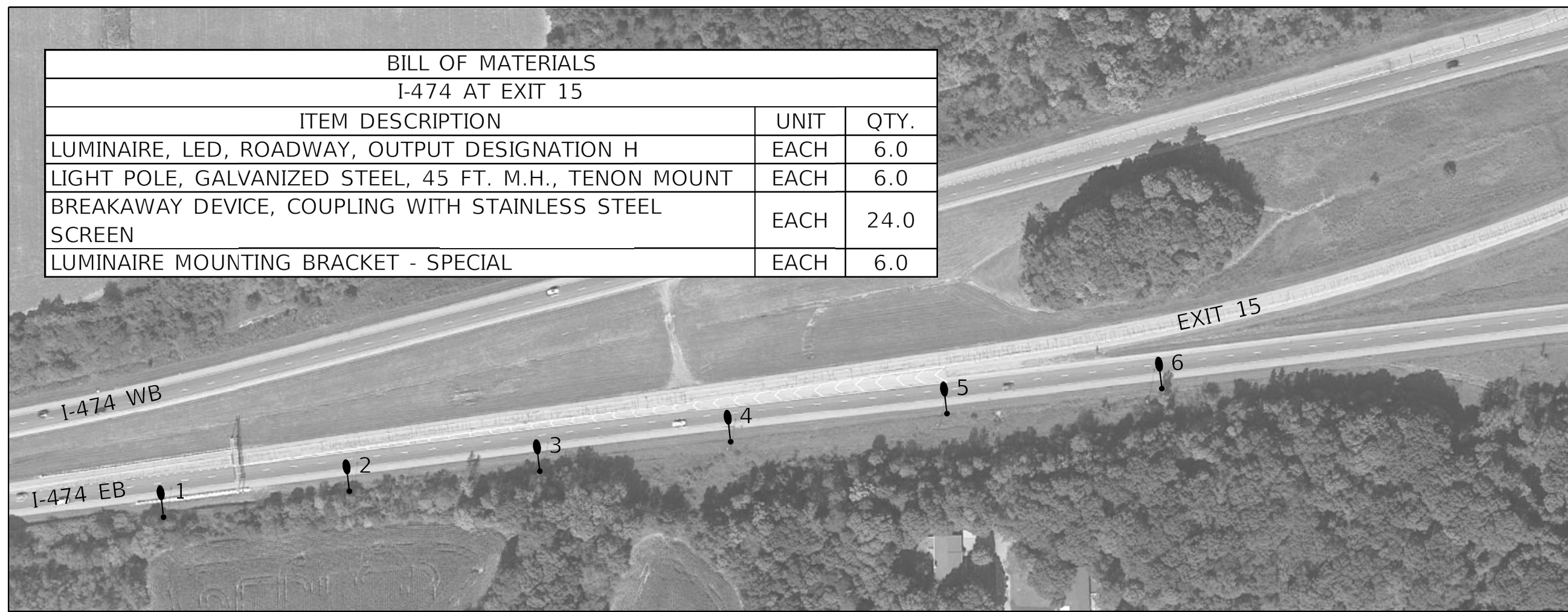
USER NAME = Trevor.Hanson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 28,0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLANS
US 136 & IL 110/ IL 336 INTERCHANGE - MCDONOUGH COUNTY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	8
CONTRACT NO. 68H61				
ILLINOIS FED. AID PROJECT				

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD NOT TO SCALE



BILL OF MATERIALS		
I-474 AT EXIT 15		
ITEM DESCRIPTION	UNIT	QTY.
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	6.0
LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H., TENON MOUNT	EACH	6.0
BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	24.0
LUMINAIRE MOUNTING BRACKET - SPECIAL	EACH	6.0

LUMINAIRE SCHEDULE								
I-474 AT EXIT 15								
POLE NUMBER	PROP. POLE TYPE	PROP. MOUNTING TYPE	MOUNTING HEIGHT (FT.)	LT P GS 45MH	LUM LED RDWY H	LUMINAIRE MT	BKWY DEV	INSTALLATION
				TEN MT (QTY.)	(QTY.)	BRKT SPL (QTY.)	COU SS SCR (QTY.)	
				EACH	EACH	EACH	EACH	
1	GALVANIZED STEEL	TENON	45.0	1.0	1.0	1.0	4.0	RE-USE EX. FOUNDATION
2	GALVANIZED STEEL	TENON	45.0	1.0	1.0	1.0	4.0	RE-USE EX. FOUNDATION
3	GALVANIZED STEEL	TENON	45.0	1.0	1.0	1.0	4.0	RE-USE EX. FOUNDATION
4	GALVANIZED STEEL	TENON	45.0	1.0	1.0	1.0	4.0	RE-USE EX. FOUNDATION
5	GALVANIZED STEEL	TENON	45.0	1.0	1.0	1.0	4.0	RE-USE EX. FOUNDATION
6	GALVANIZED STEEL	TENON	45.0	1.0	1.0	1.0	4.0	RE-USE EX. FOUNDATION

NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FUSEHOLDERS, FUSES, SURGE ARRESTORS, AND WIRING FOR EACH PROPOSED LUMINAIRE IN ACCORDANCE WITH HIGHWAY STANDARD 821101-02. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE OF THE PROPOSED LUMINAIRES.
2. THE PROPOSED LIGHT POLES AND COUPLINGS SHALL BE INSTALLED ON EXISTING FOUNDATIONS.
3. THE EXISTING LUMINAIRE VOLTAGE IS 480V.
4. THE CONTRACTOR SHALL VERIFY LUMINAIRE VOLTAGE PRIOR TO ORDERING MATERIALS.

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

MODEL PATH: S:\CEN\WV\ORD\DESIGN\AN\Hanson# 68H61_C4 Lighting_2023\C4 Electrical 2023 (FINAL) 03-31-23.dgn

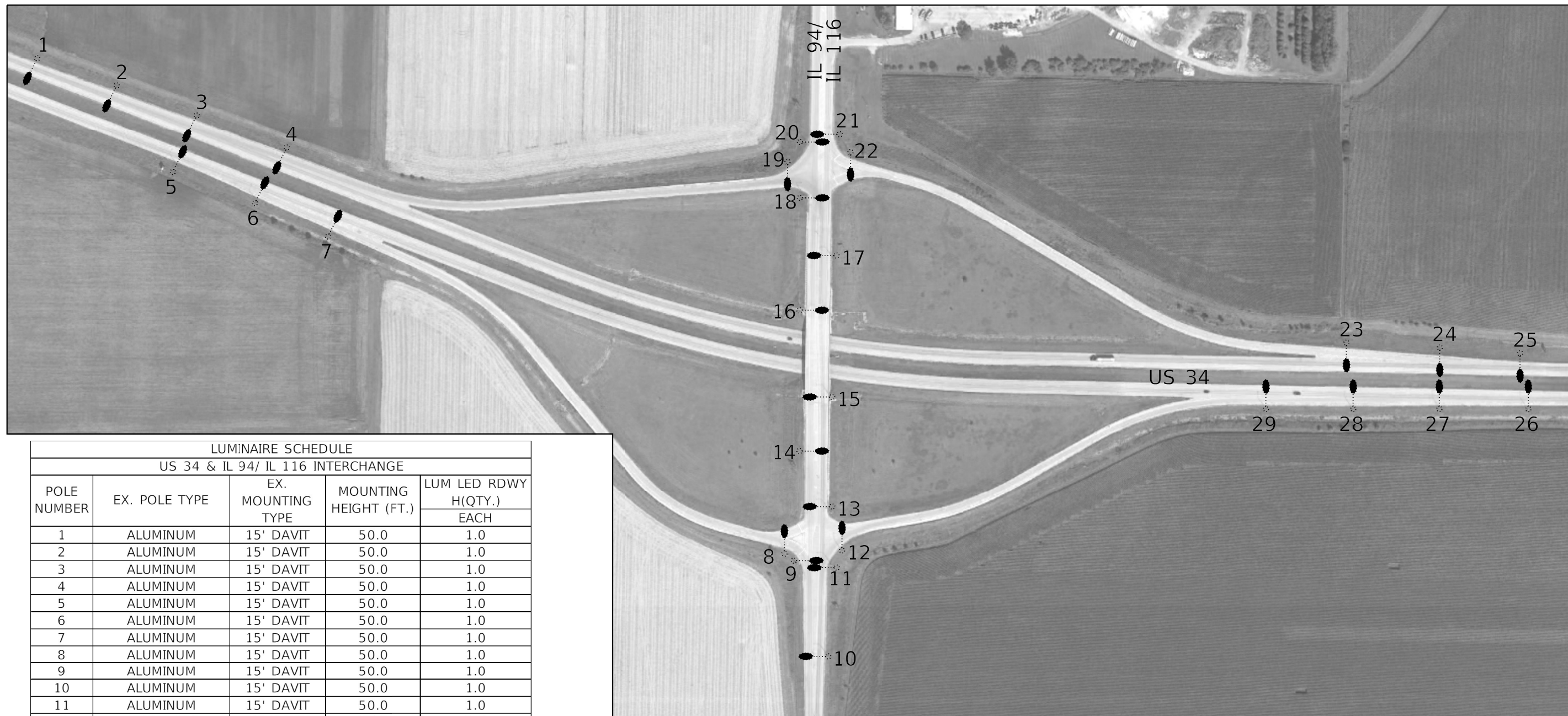
USER NAME = Trevor.Hanson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 28,0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED LIGHTING PLANS
I-474 AT EXIT 15 - TAZEWELL COUNTY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	9
			CONTRACT NO. 68H61	
ILLINOIS FED. AID PROJECT				



LUMINAIRE SCHEDULE				
US 34 & IL 94/ IL 116 INTERCHANGE				
POLE NUMBER	EX. POLE TYPE	EX. MOUNTING TYPE	MOUNTING HEIGHT (FT.)	LUM LED RDWY
				H(QTY.) EACH
1	ALUMINUM	15' DAVIT	50.0	1.0
2	ALUMINUM	15' DAVIT	50.0	1.0
3	ALUMINUM	15' DAVIT	50.0	1.0
4	ALUMINUM	15' DAVIT	50.0	1.0
5	ALUMINUM	15' DAVIT	50.0	1.0
6	ALUMINUM	15' DAVIT	50.0	1.0
7	ALUMINUM	15' DAVIT	50.0	1.0
8	ALUMINUM	15' DAVIT	50.0	1.0
9	ALUMINUM	15' DAVIT	50.0	1.0
10	ALUMINUM	15' DAVIT	50.0	1.0
11	ALUMINUM	15' DAVIT	50.0	1.0
12	ALUMINUM	15' DAVIT	50.0	1.0
13	ALUMINUM	15' DAVIT	50.0	1.0
14	ALUMINUM	15' DAVIT	50.0	1.0
15	ALUMINUM	10' DAVIT	45.0	1.0
16	ALUMINUM	10' DAVIT	45.0	1.0
17	ALUMINUM	15' DAVIT	50.0	1.0
18	ALUMINUM	15' DAVIT	50.0	1.0
19	ALUMINUM	15' DAVIT	50.0	1.0
20	ALUMINUM	15' DAVIT	50.0	1.0
21	ALUMINUM	15' DAVIT	50.0	1.0
22	ALUMINUM	15' DAVIT	50.0	1.0
23	ALUMINUM	15' DAVIT	50.0	1.0
24	ALUMINUM	15' DAVIT	50.0	1.0
25	ALUMINUM	15' DAVIT	50.0	1.0
26	ALUMINUM	15' DAVIT	50.0	1.0
27	ALUMINUM	15' DAVIT	50.0	1.0
28	ALUMINUM	15' DAVIT	50.0	1.0
29	ALUMINUM	15' DAVIT	50.0	1.0

BILL OF MATERIALS		
US 34 & IL 94/ IL 116 INTERCHANGE		
ITEM DESCRIPTION	UNIT	QTY.
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	29.0

NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FUSEHOLDERS, FUSES, SURGE ARRESTORS, AND WIRING FOR EACH PROPOSED LUMINAIRE IN ACCORDANCE WITH HIGHWAY STANDARD 821101-02. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE OF THE PROPOSED LUMINAIRES.
2. THE EXISTING LUMINAIRE VOLTAGE IS 480V.
3. THE CONTRACTOR SHALL VERIFY LUMINAIRE VOLTAGE PRIOR TO ORDERING MATERIALS.

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

MODEL: Default
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PLOT SCALE = 28,0523 * / in.	DRAWN -	REVISED -
PLOT DATE = 3/31/2023	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLANS
US 34 & IL 94/ IL 116 INTERCHANGE - HENDERSON COUNTY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	10
			CONTRACT NO. 68H61	
			ILLINOIS FED. AID PROJECT	



* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

MODEL Path: \\S:\CEN\WV\ORD\DESIGN\AN\Hanson\# 68H61_C4 Lighting 2023\C4 Electrical 2023 (FINAL_03-31-23).dgn
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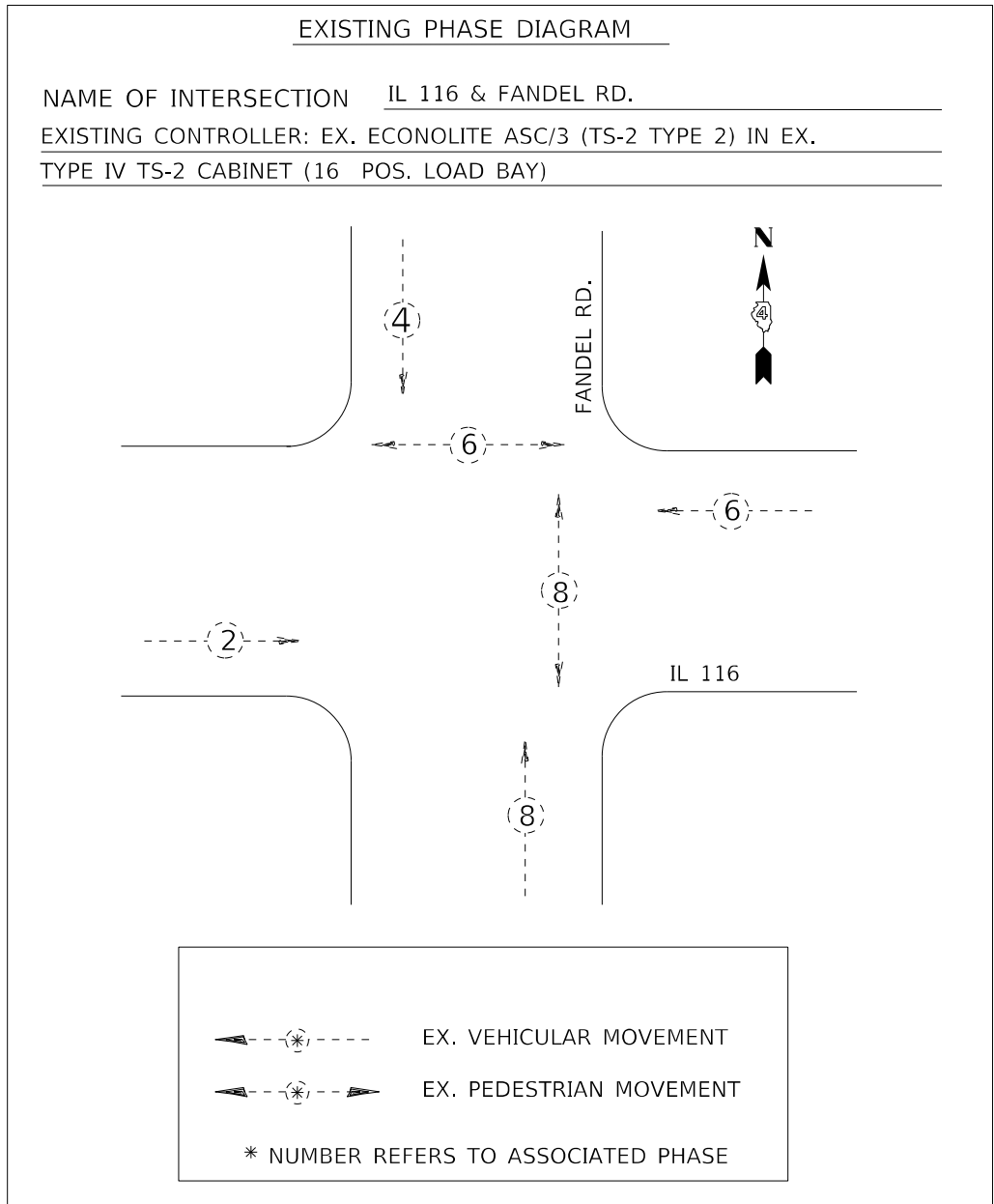
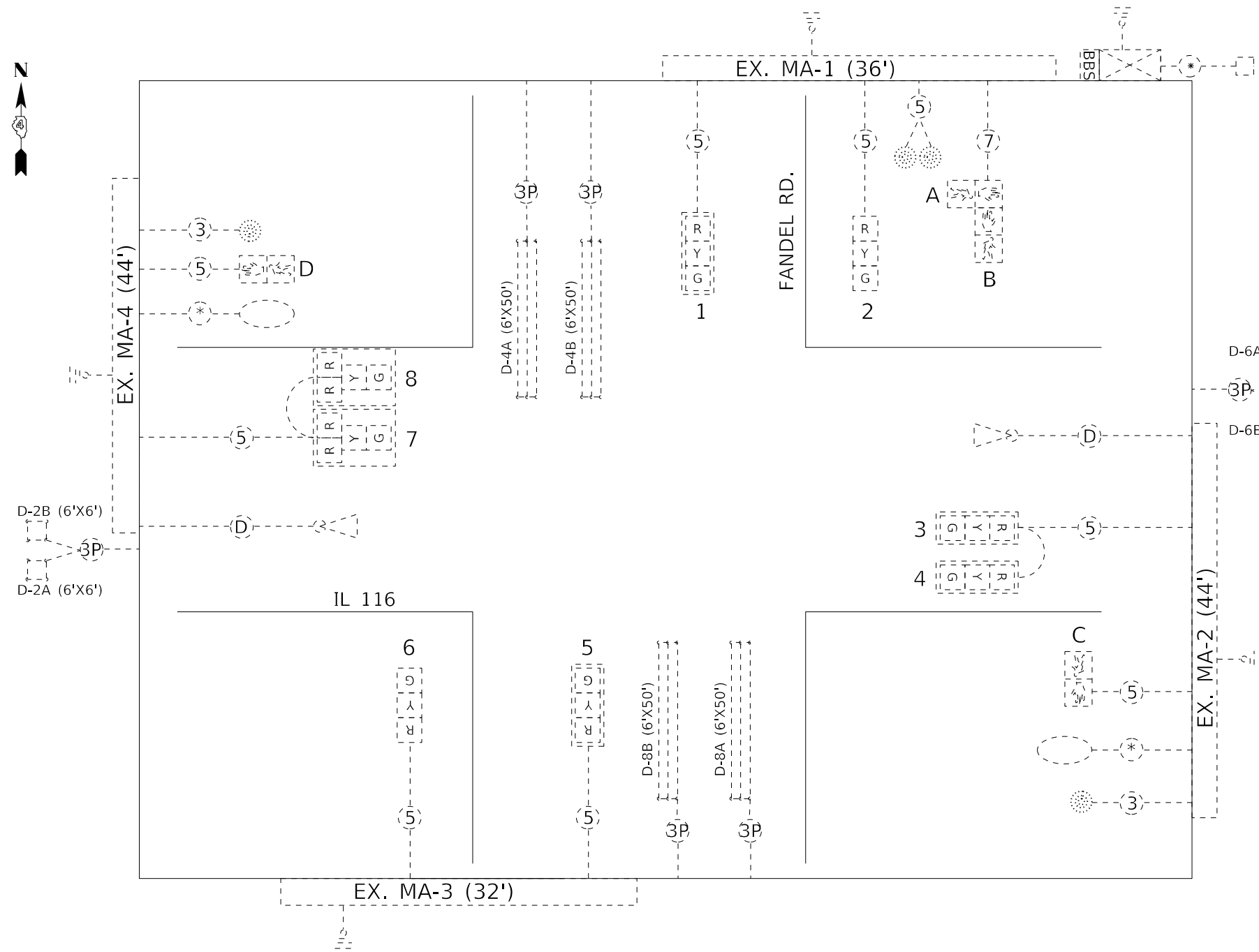
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PLOT SCALE = 28.0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING TRAFFIC SIGNAL PLANS
IL 116 & FANDEL RD. - GERMANTOWN HILLS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	11
			CONTRACT NO. 68H61	
		ILLINOIS	FED. AID PROJECT	



TRAFFIC SIGNALS LEGEND

<p> EX. TRAFFIC SIGNAL CONTROLLER CABINET (MODIFIED)</p> <p> EX. ELECTRIC SERVICE</p> <p> EX. GROUND/SAFETY BOND</p> <p> EX. DETECTOR LOOP</p> <p> EX. QUADRAPOLE DETECTOR LOOP</p> <p> EX. LUMINAIRE</p>	<p> EX. 3 SEC. SIGNAL HEAD WITH BACKPLATE</p> <p> PROP. PEDESTRIAN SIGNAL HEAD</p> <p> EX. PUSHBUTTON</p> <p> EX. TRAFFIC SIGNAL BATTERY BACKUP SYSTEM</p> <p> EX. MICROWAVE DETECTOR</p>	<p> EX. 3/C NO. 14 SIGNAL CABLE</p> <p> EX. 5/C NO. 14 SIGNAL CABLE</p> <p> EX. 7/C NO. 14 SIGNAL CABLE</p> <p> EX. 1/C NO. 6 CABLE</p> <p> EX. NO. 18 3-PR DETECTOR LOOP CABLE</p> <p> EX. MICROWAVE DETECTOR CABLE</p>
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* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

MODEL: D:\p\h\p\... FILE NAME: S:\CEN\W\W\ORD\ESP\AN\Hanson# 68H61_C4 Lighting_2023\C4 Electrical 2023 (FINAL_03-31-23).dgn

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -	
DRAWN -	REVISOR -	REVISION -	
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PLOT DATE = 3/31/2023	DATE -	REVISOR -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING CABLE & PHASE DIAGRAMS
IL 116 & FANDEL RD. - GERMANTOWN HILLS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	12
			CONTRACT NO. 68H61	
ILLINOIS FED. AID PROJECT				



BILL OF MATERIALS		
IL 116 & FANDEL RD. - GERMANTOWN HILLS		
ITEM DESCRIPTION	UNIT	QTY.
SIGN PANEL - TYPE 1	SQ FT	10.0
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	746.0
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2.0
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2.0
TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	4.0
MODIFY EXISTING CONTROLLER CABINET, SPECIAL	EACH	1.0

TRAFFIC SIGNAL HEAD SCHEDULE			
IL 116 & FANDEL RD.			
PROP. QTY.	UNIT	ITEM	LOCATION
2.0	EACH	SH P LED 1F 3S BM	9,11
2.0	EACH	SH P LED 1F 3S MAM	10,12
4.0	EACH	TS BACKPLATE RET-REFL	9,10,11,12

MODEL Path: \\S:\CEN\WV\ORD\DESIGN\AN\Hanson\68H61_C4 Lighting_2023\C4 Electrical 2023 (FINAL_03-31-23).logp
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* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

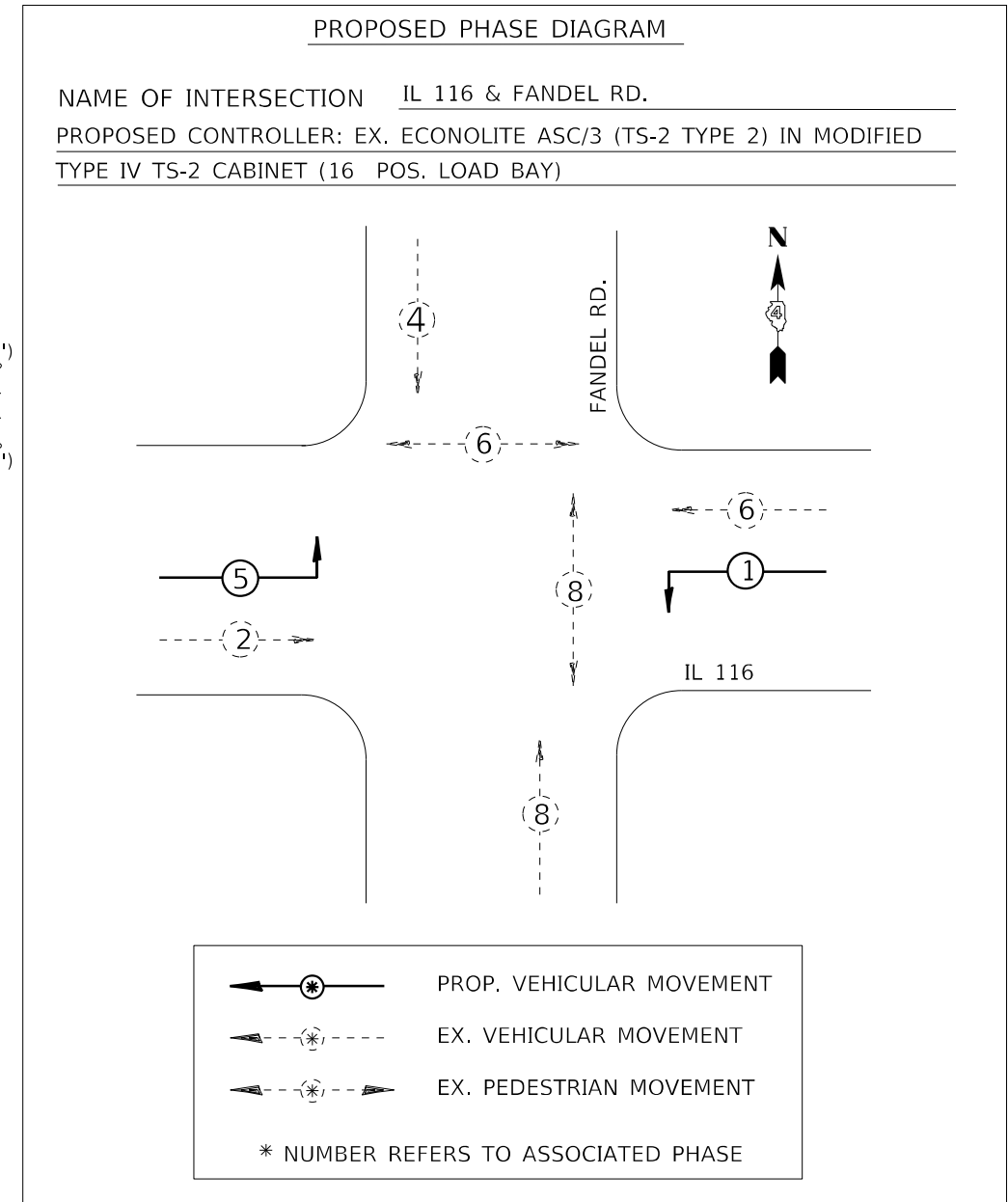
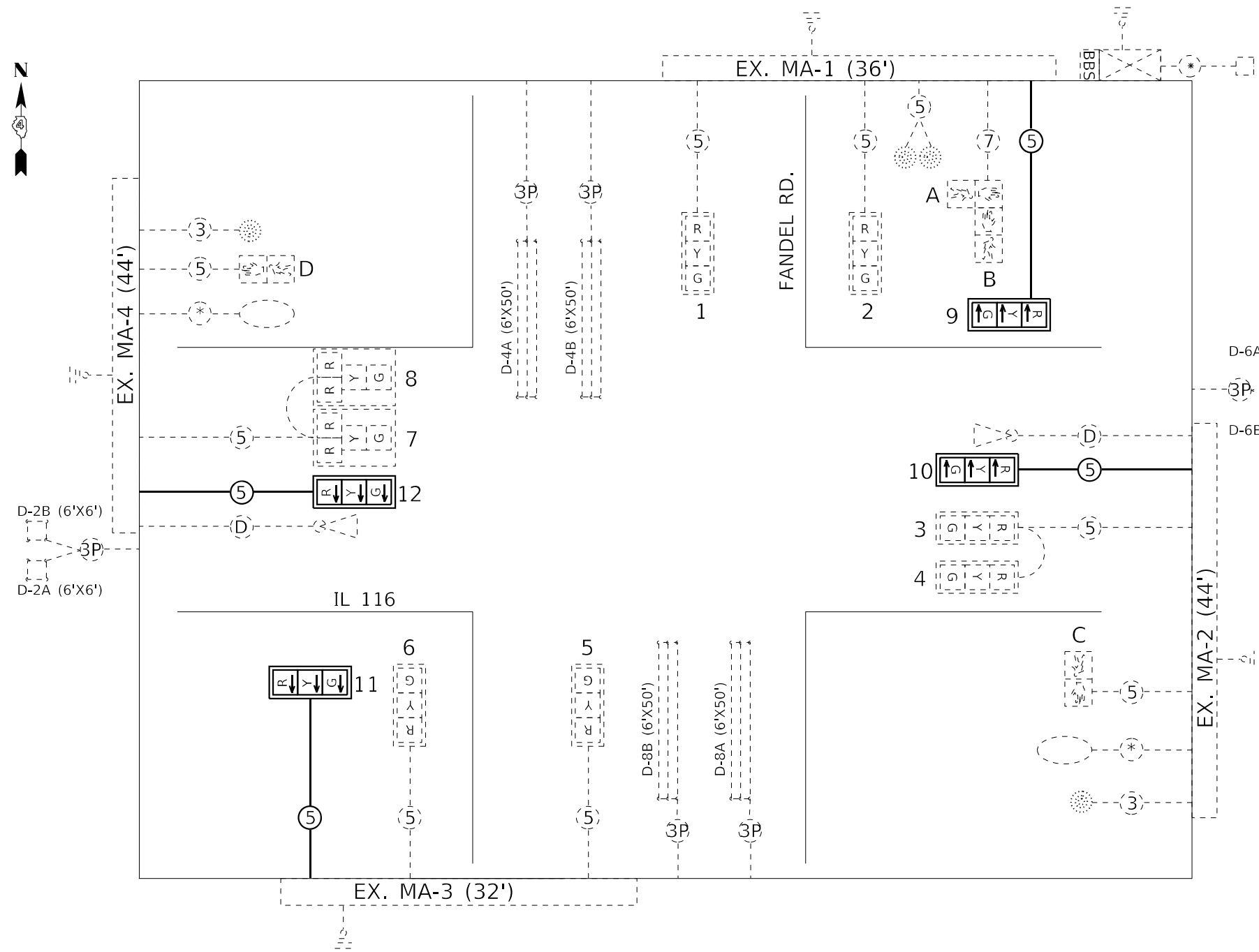
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PLOT SCALE = 28,0523 * / in.	DRAWN -	REVISED -
PLOT DATE = 3/31/2023	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED TRAFFIC SIGNAL IMPROVEMENTS
IL 116 & FANDEL RD. - GERMANTOWN HILLS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	13
			CONTRACT NO. 68H61	
		ILLINOIS	FED. AID PROJECT	



TRAFFIC SIGNALS LEGEND

- | | | | | | |
|--|--|--|--|--|-------------------------------|
| | EX. TRAFFIC SIGNAL CONTROLLER CABINET (MODIFIED) | | EX. 3 SEC. SIGNAL HEAD WITH BACKPLATE | | EX. 3/C NO. 14 SIGNAL CABLE |
| | EX. ELECTRIC SERVICE | | PROP. 3 SEC. SIGNAL HEAD WITH BACKPLATE | | PROP. 5/C NO. 14 SIGNAL CABLE |
| | EX. GROUND/SAFETY BOND | | PROP. PEDESTRIAN SIGNAL HEAD | | EX. 5/C NO. 14 SIGNAL CABLE |
| | EX. DETECTOR LOOP | | EX. PUSHBUTTON | | EX. 7/C NO. 14 SIGNAL CABLE |
| | EX. QUADRAPOLE DETECTOR LOOP | | EX. TRAFFIC SIGNAL BATTERY BACKUP SYSTEM | | EX. 1/C NO. 6 CABLE |
| | EX. LUMINAIRE | | EX. NO. 18 3-PR DETECTOR LOOP CABLE | | EX. MICROWAVE DETECTOR CABLE |
| | | | EX. MICROWAVE DETECTOR | | |

EXISTING TRAFFIC SIGNAL CONTROLLER AND MMU TO BE RE-USED IN MODIFIED CONTROLLER CABINET.

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

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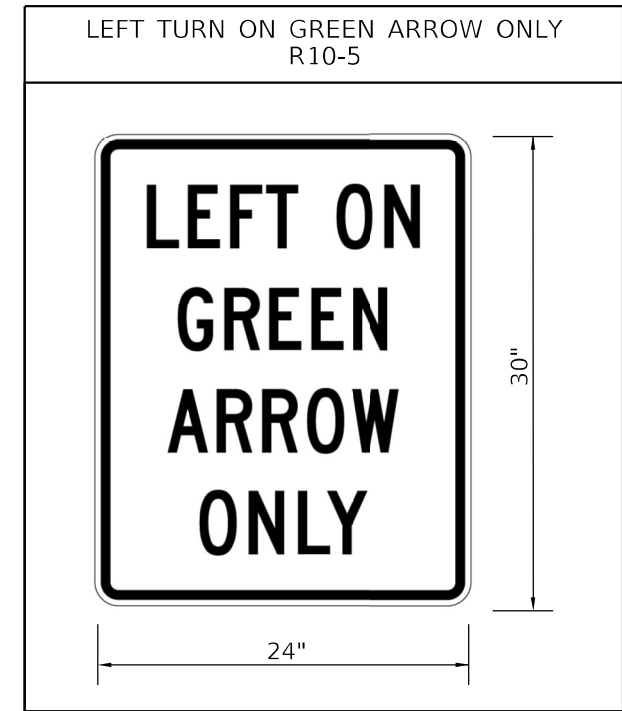
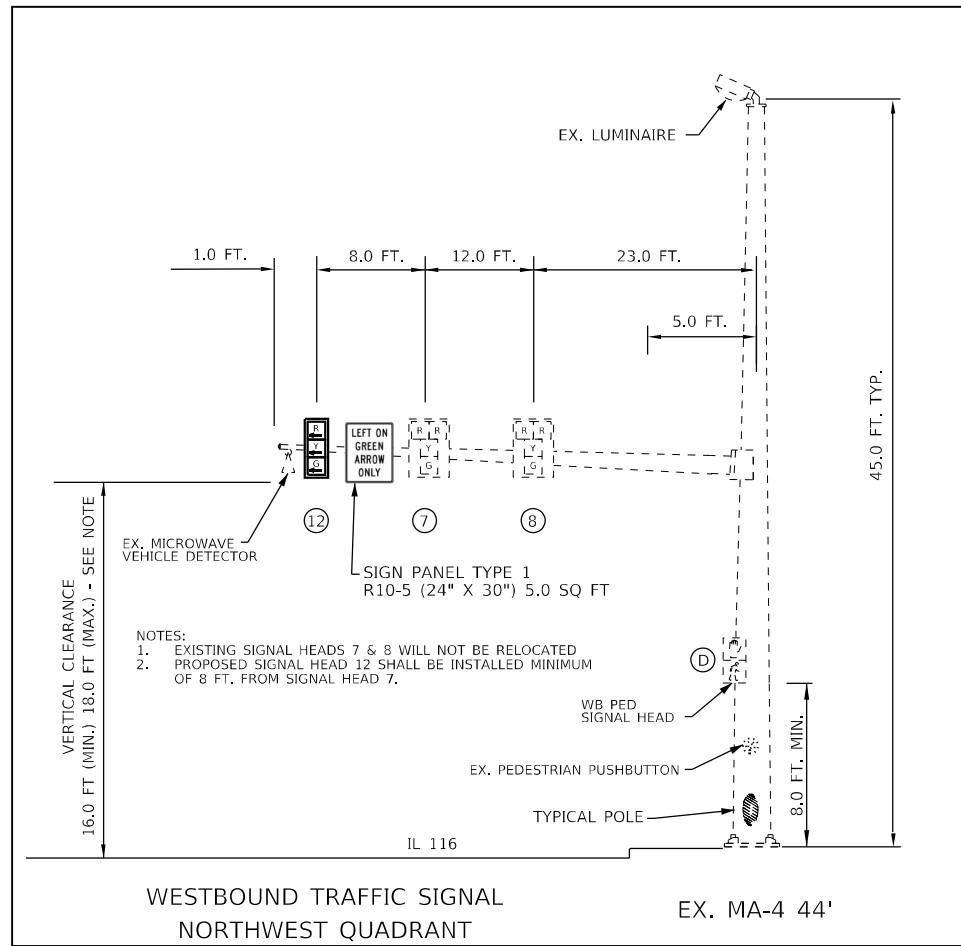
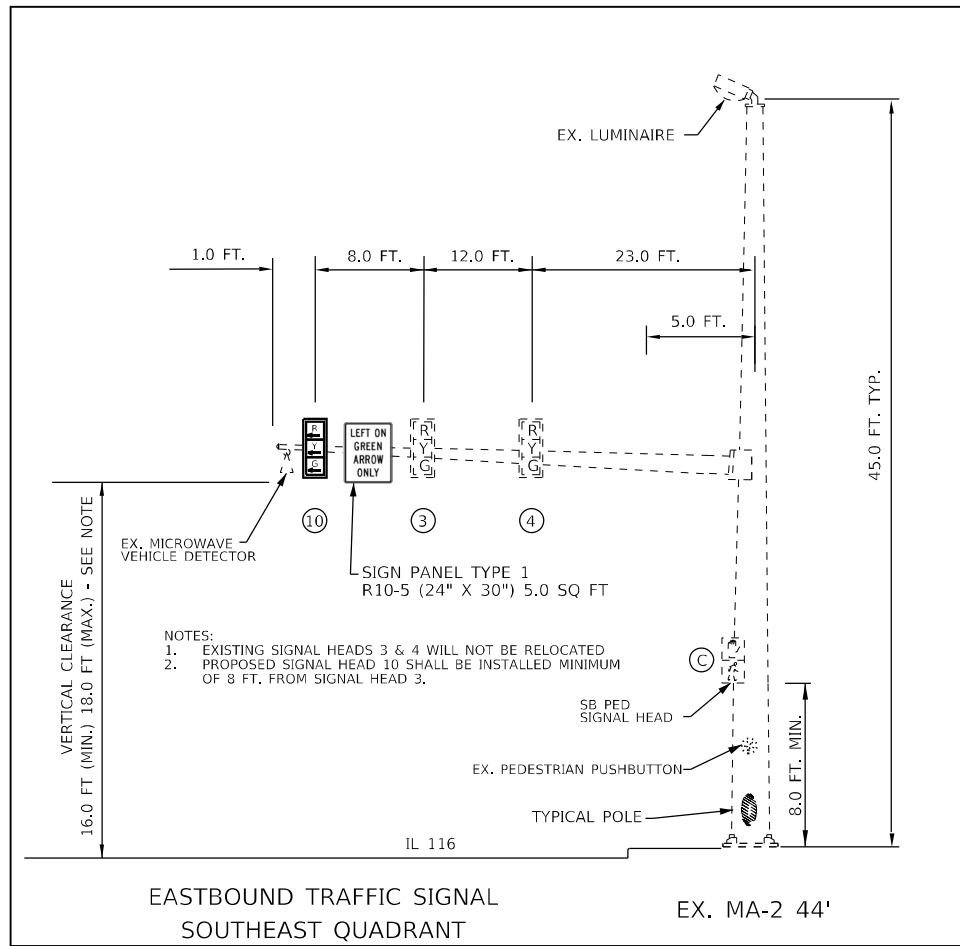
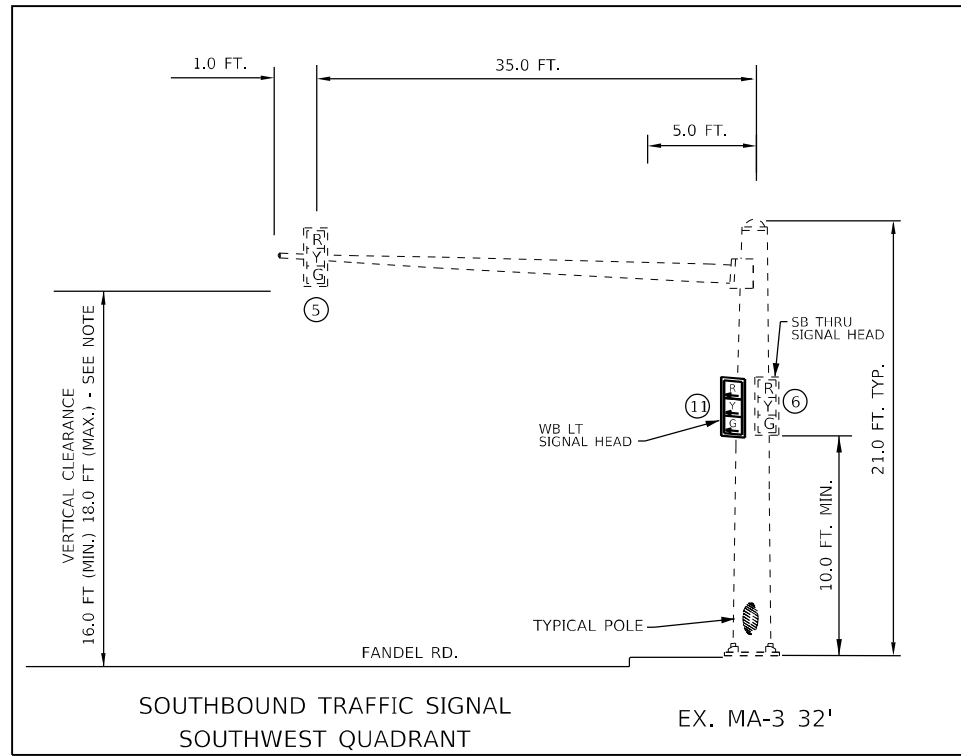
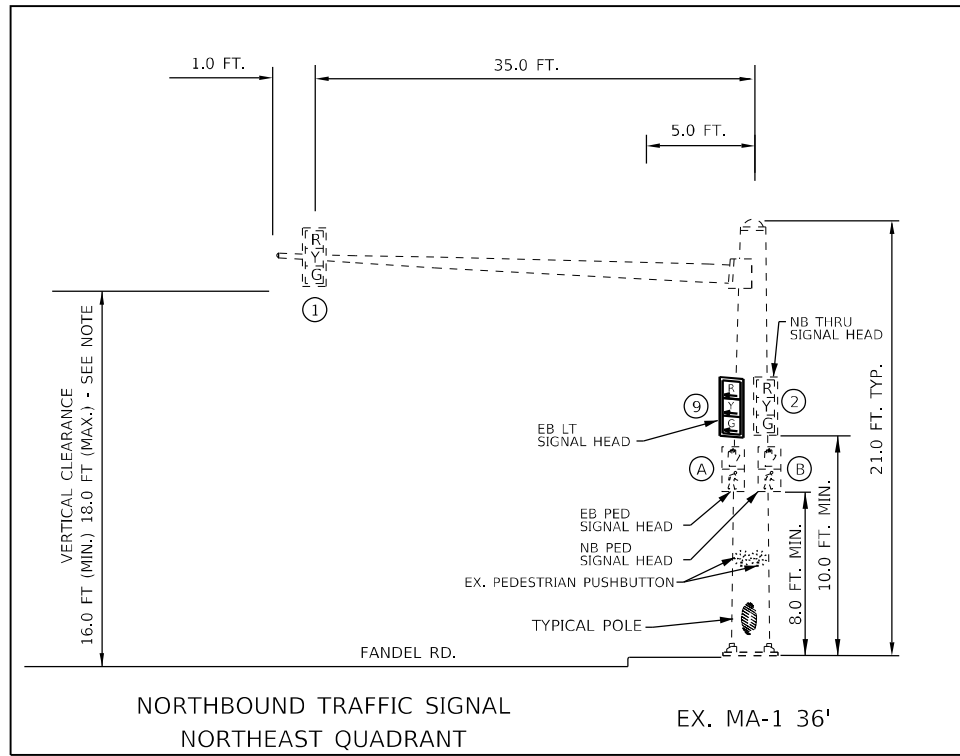
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DRAWN -	REVISIONS -	
PLOT SCALE = 28,0523 * / in.	CHECKED -	REVISIONS -
PLOT DATE = 3/31/2023	DATE -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED CABLE & PHASE DIAGRAMS
IL 116 & FANDEL RD. - GERMANTOWN HILLS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	14
			CONTRACT NO. 68H61	
ILLINOIS FED. AID PROJECT				



- NOTES:**
1. THE VERTICAL CLEARANCE REQUIREMENTS BETWEEN THE BOTTOM OF THE LOWEST SIGNAL HEAD BACKPLATE AND THE HIGHEST POINT OF THE PAVEMENT ARE AS FOLLOWS: 16.0 FT (MIN.) AND 18.0 FT (MAX.)
 2. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" SINGLE LED LENSES.
 3. THE RED SECTIONS OF THE SIGNAL HEADS SHARING THE SAME MAST ARM SHALL BE LEVEL WITH ONE ANOTHER.

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PLOT SCALE = 28,0523 * / in.	DRAWN -	REVISED -
PLOT DATE = 3/31/2023	CHECKED -	REVISED -
	DATE -	REVISED -

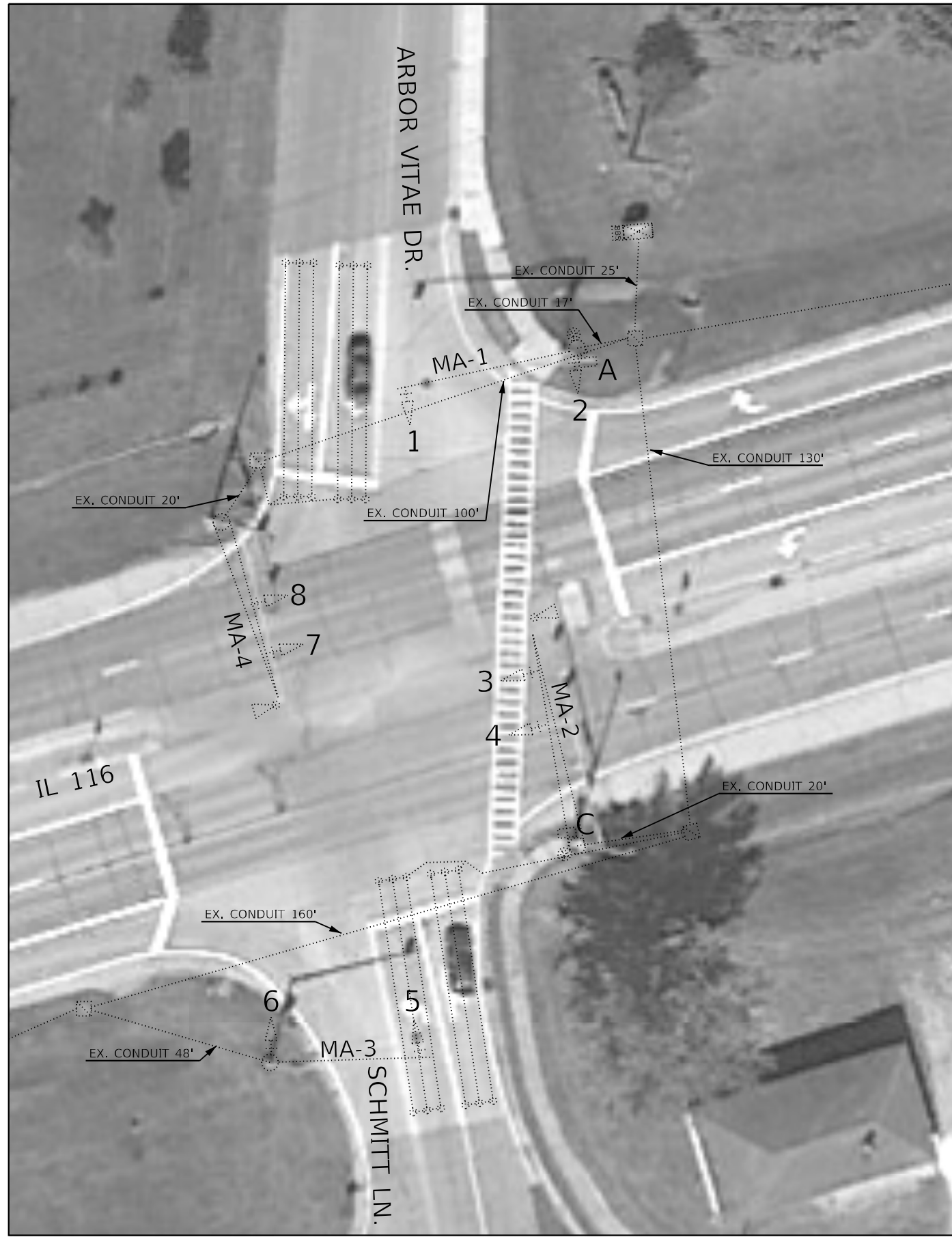
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED MAST ARM DETAILS
IL 116 & FANDEL RD. - GERMANTOWN HILLS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	15
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68H61	

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD
NOT TO SCALE



MODEL: Default
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* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

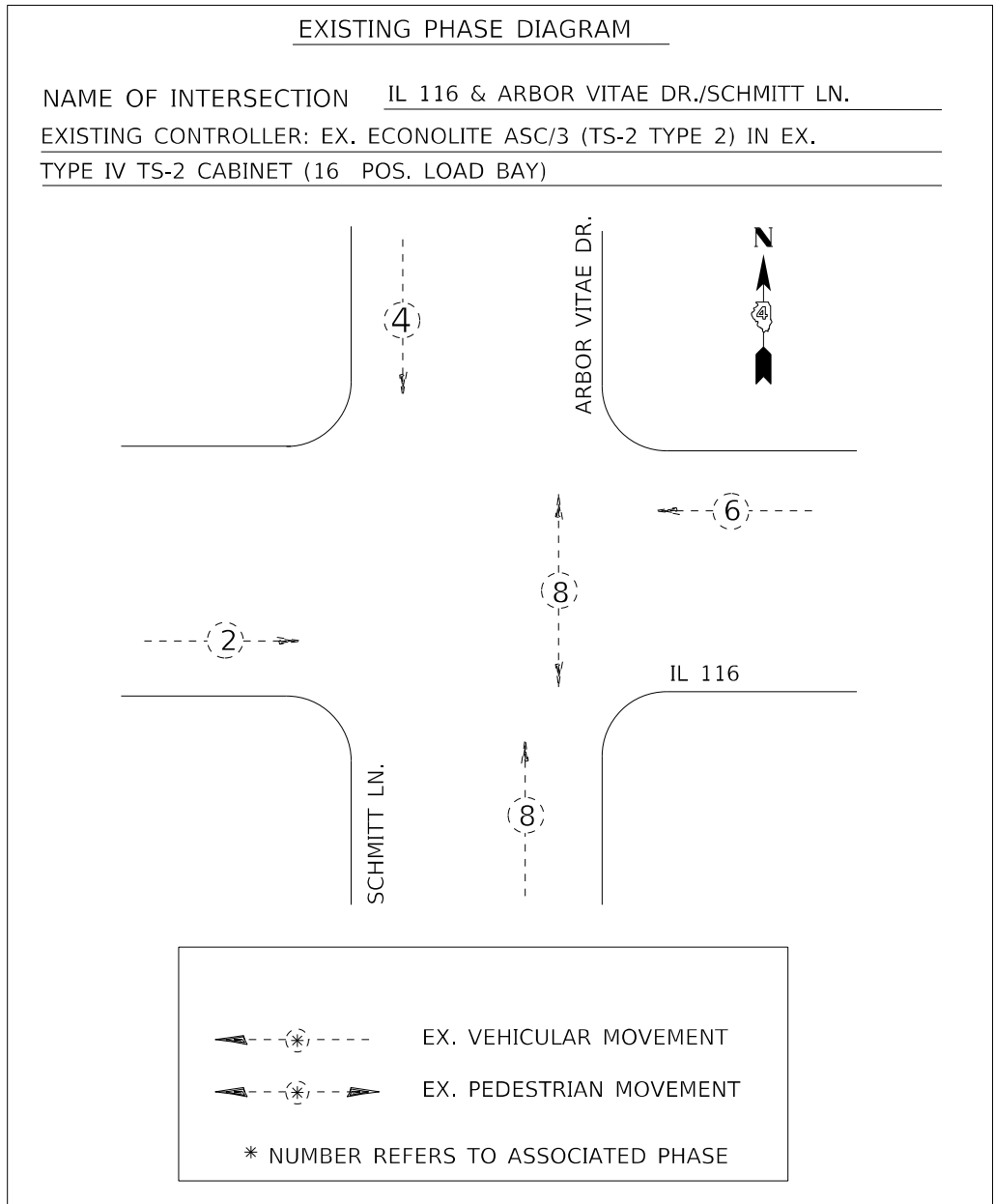
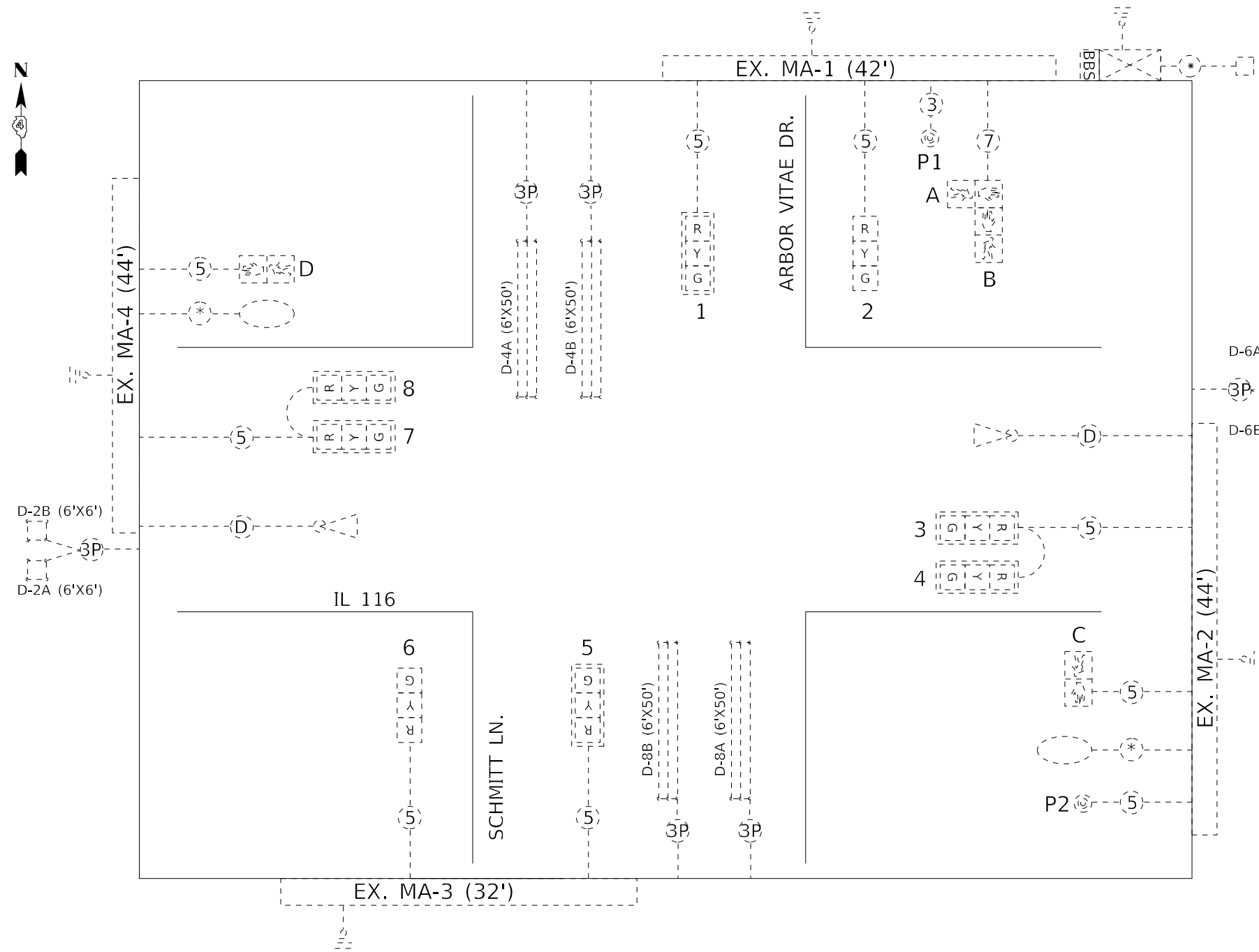
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PLOT SCALE = 28.0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TRAFFIC SIGNAL PLANS
IL 116 & ARBOR VITAE DR./SCHMITT LN. - GERMANTOWN HILLS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	16
			CONTRACT NO. 68H61	
		ILLINOIS	FED. AID PROJECT	



TRAFFIC SIGNALS LEGEND

<p> EX. TRAFFIC SIGNAL CONTROLLER CABINET (MODIFIED)</p> <p> EX. ELECTRIC SERVICE</p> <p> EX. GROUND/SAFETY BOND</p> <p> EX. DETECTOR LOOP</p> <p> EX. QUADRAPOLE DETECTOR LOOP</p> <p> EX. LUMINAIRE</p>	<p> EX. 3 SEC. SIGNAL HEAD WITH BACKPLATE</p> <p> PROP. PEDESTRIAN SIGNAL HEAD</p> <p> EX. TRAFFIC SIGNAL BATTERY BACKUP SYSTEM</p> <p> EX. MICROWAVE DETECTOR</p>	<p> EX. 3/C NO. 14 SIGNAL CABLE</p> <p> EX. 5/C NO. 14 SIGNAL CABLE</p> <p> EX. 7/C NO. 14 SIGNAL CABLE</p> <p> EX. 1/C NO. 6 CABLE</p> <p> EX. NO. 18 3-PR DETECTOR LOOP CABLE</p> <p> EX. MICROWAVE DETECTOR CABLE</p>
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* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

MODEL: D:\p\h\p\... FILE NAME: S:\CEN\WV\ORD\ESP\AVHanson# 68H61_C4 Lighting_2023\C4 Electrical 2023 (FINAL_03-31-23).dgn

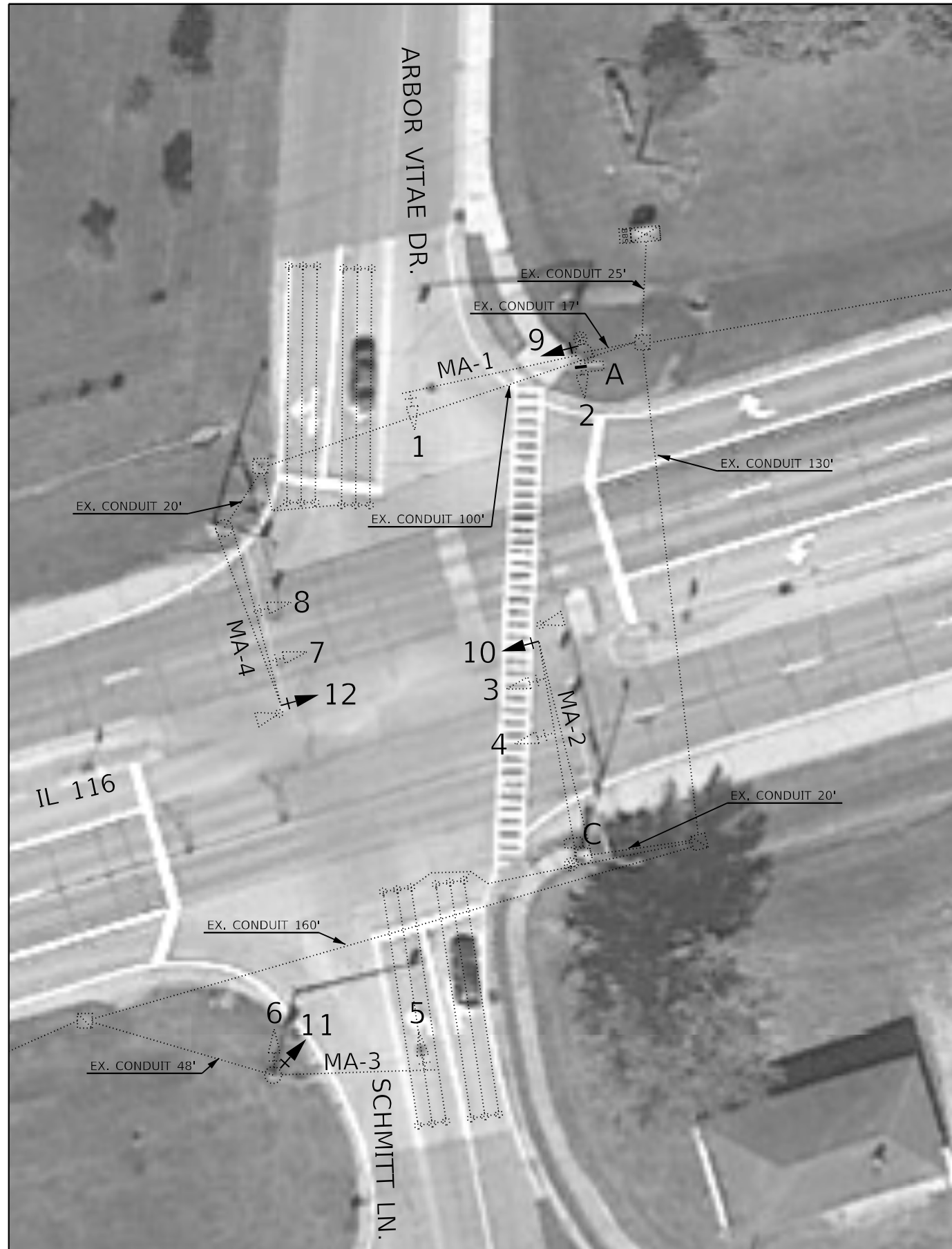
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PLOT DATE = 3/31/2023	DATE -	REVISOR -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING CABLE & PHASE DIAGRAMS
IL 116 & ARBOR VITAE DR./SCHMITT LN. - GERMANTOWN HILLS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	17
CONTRACT NO. 68H61				
ILLINOIS FED. AID PROJECT				



BILL OF MATERIALS		
IL 116 & ARBOR VITAE DR./SCHMITT LN. - GERMANTOWN HILLS		
ITEM DESCRIPTION	UNIT	QTY.
SIGN PANEL - TYPE 1	SQ FT	10.0
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	964.0
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2.0
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2.0
TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	4.0
MODIFY EXISTING CONTROLLER CABINET, SPECIAL	EACH	1.0

TRAFFIC SIGNAL HEAD SCHEDULE			
IL 116 & ARBOR VITAE DR./ SCHMITT LN.			
PROP. QTY.	UNIT	ITEM	LOCATION
2.0	EACH	SH P LED 1F 3S BM	9,11
2.0	EACH	SH P LED 1F 3S MAM	10,12
4.0	EACH	TS BACKPLATE RET-REFL	9,10,11,12

MODEL: Default
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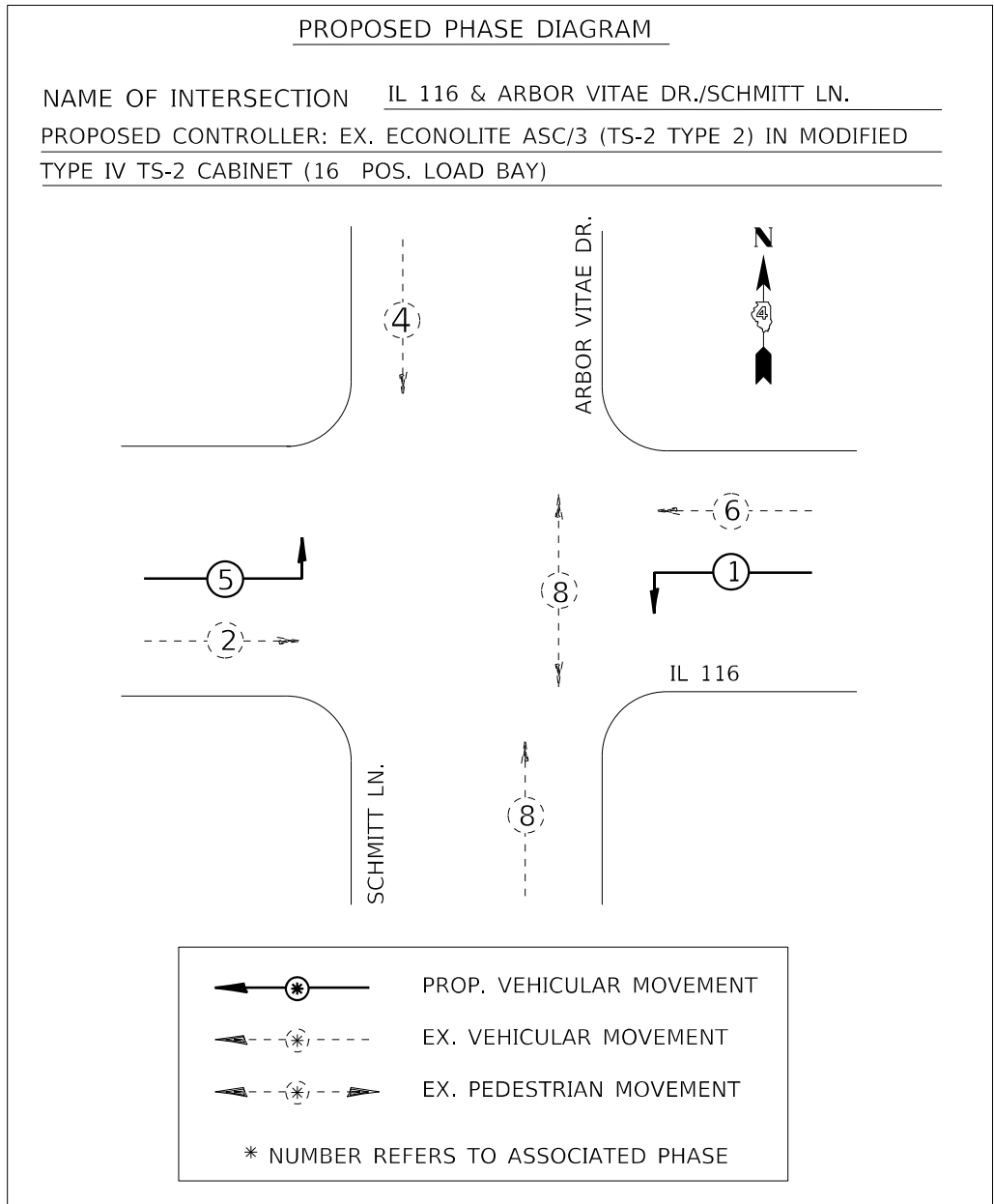
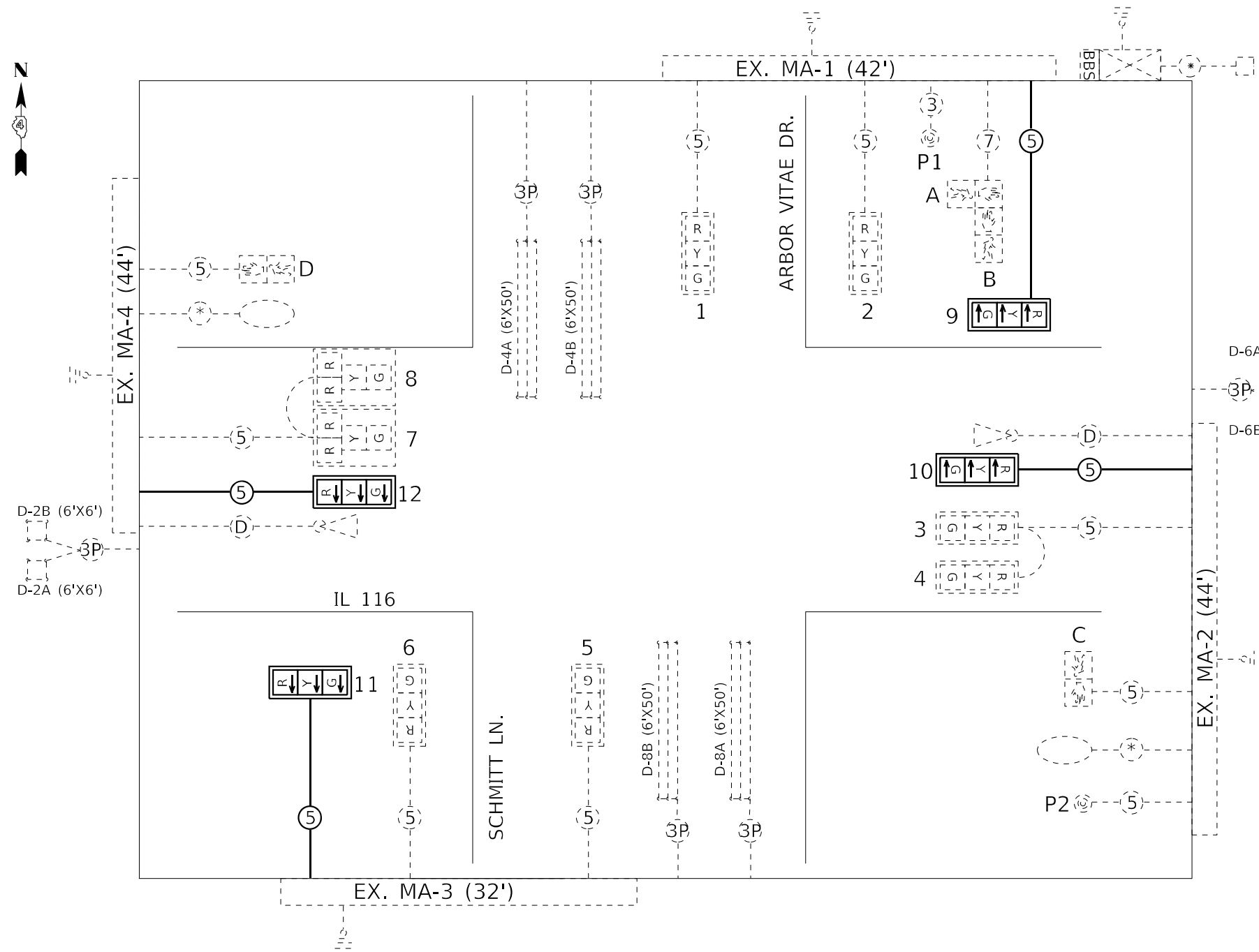
* FULTON, KNOX, MCDONOUGH, PEORIA,
 TAZEWELL, WARREN AND WOODFORD
 NOT TO SCALE

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 28.0523 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/31/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL IMPROVEMENTS IL 116 & ARBOR VITAE DR./SCHMITT LN. - GERMANTOWN HILLS			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	18
			CONTRACT NO. 68H61	
		ILLINOIS	FED. AID PROJECT	



TRAFFIC SIGNALS LEGEND

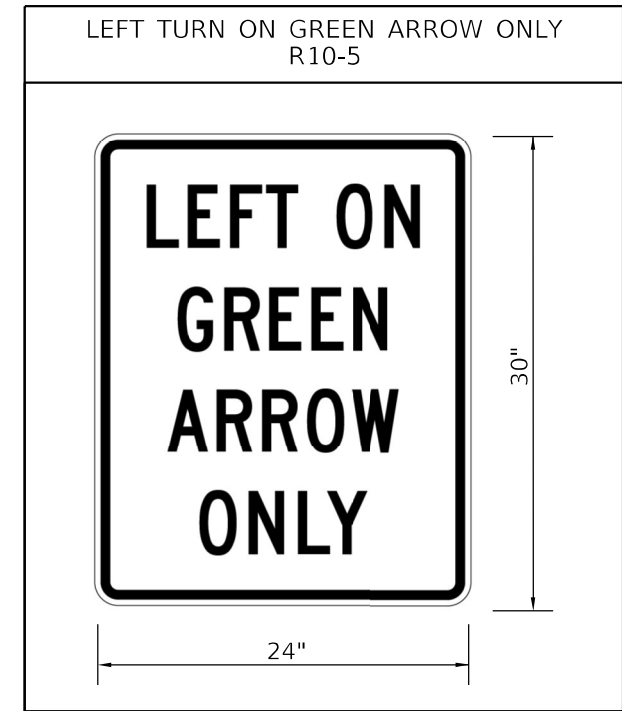
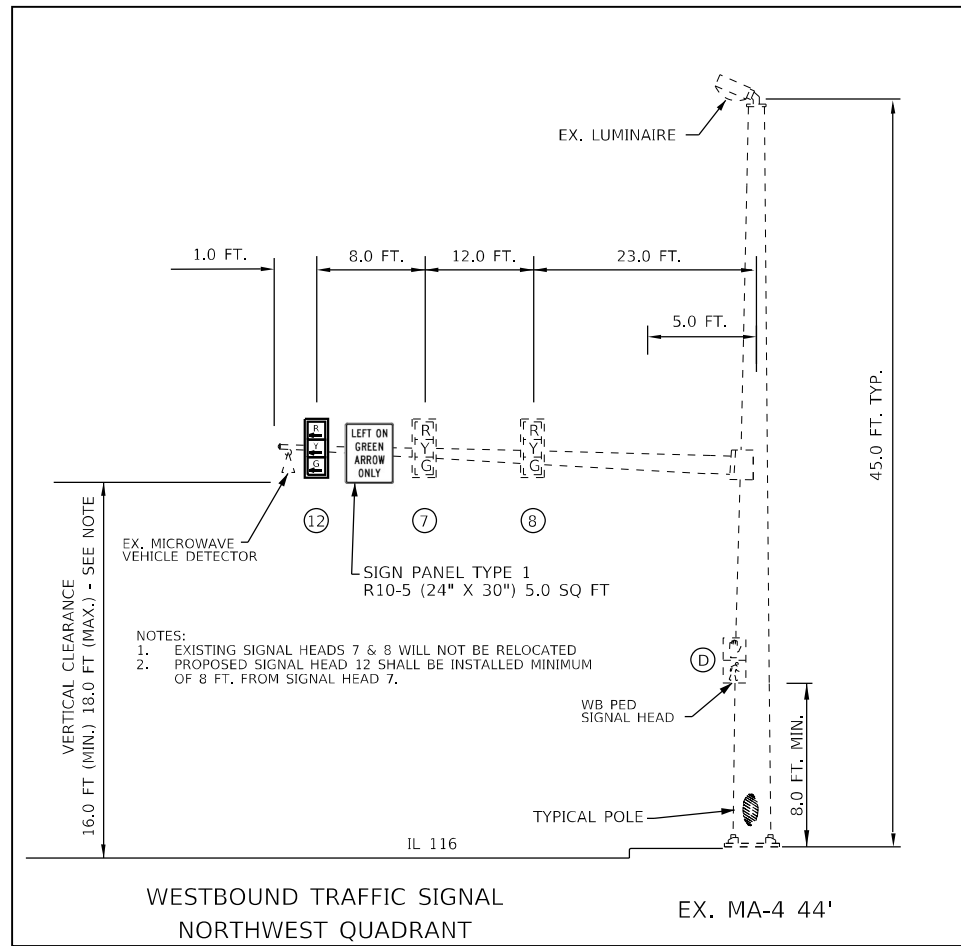
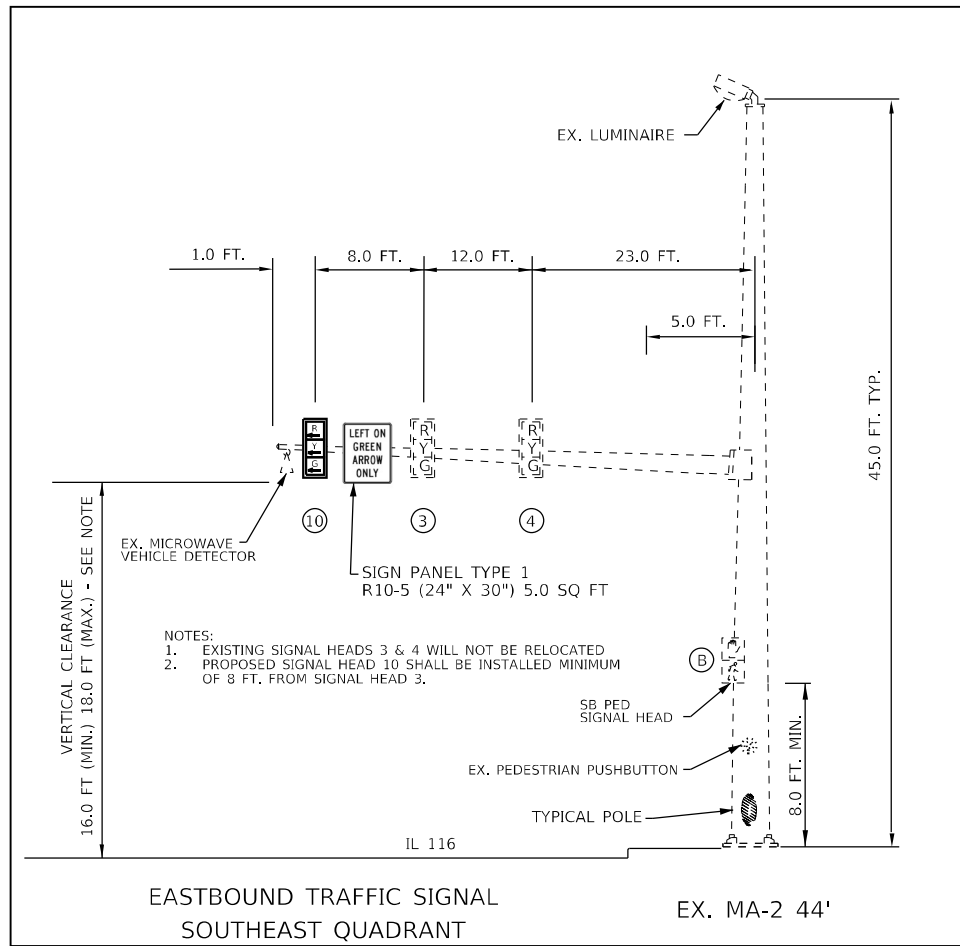
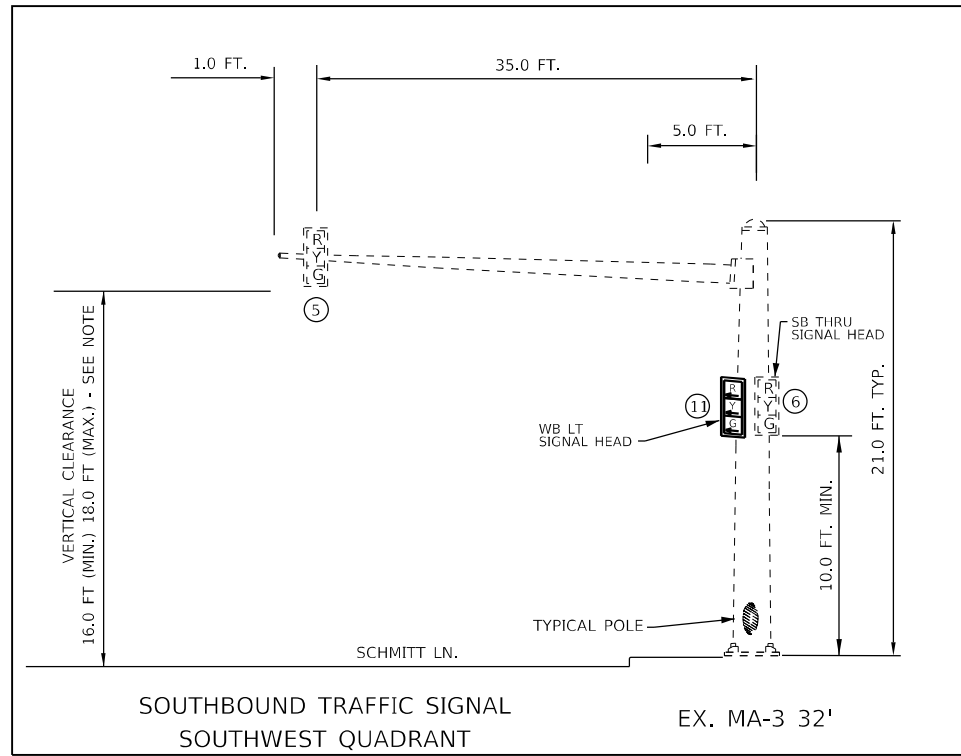
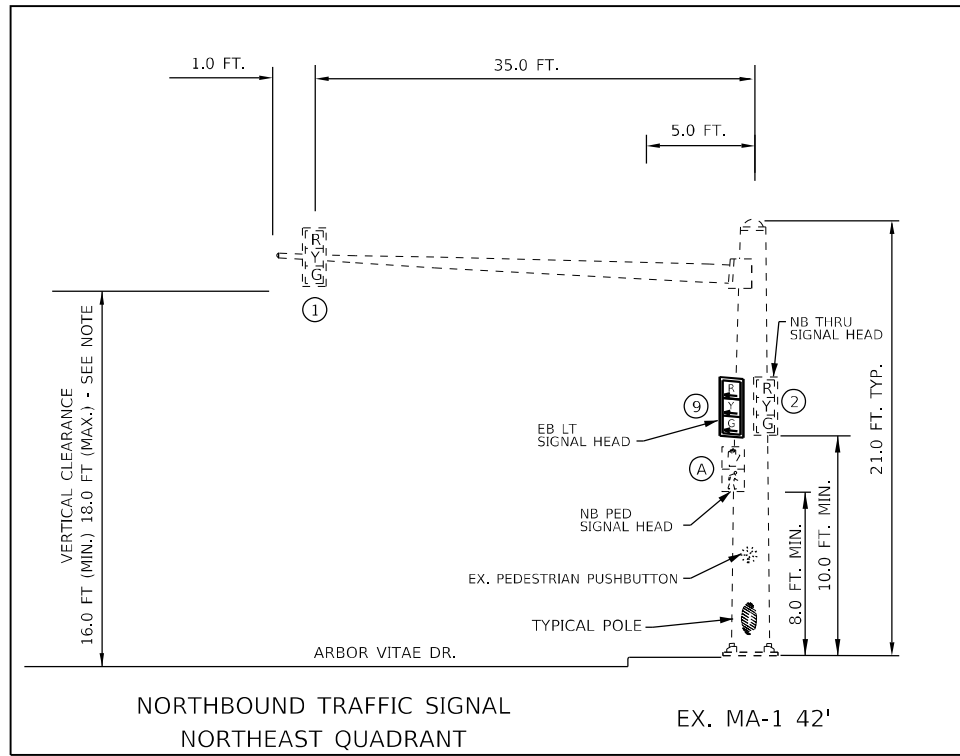
<p> EX. TRAFFIC SIGNAL CONTROLLER CABINET (MODIFIED)</p> <p> EX. ELECTRIC SERVICE</p> <p> EX. GROUND/SAFETY BOND</p> <p> EX. DETECTOR LOOP</p> <p> EX. QUADRAPOLE DETECTOR LOOP</p> <p> EX. LUMINAIRE</p>	<p> EX. 3 SEC. SIGNAL HEAD WITH BACKPLATE</p> <p> EX. 3 SEC. SIGNAL HEAD WITH PROP. BACKPLATE</p> <p> PROP. 3 SEC. SIGNAL HEAD WITH BACKPLATE</p> <p> PROP. PEDESTRIAN SIGNAL HEAD</p> <p> EX. PUSHBUTTON</p> <p> EX. TRAFFIC SIGNAL BATTERY BACKUP SYSTEM</p> <p> EX. MICROWAVE DETECTOR</p>	<p> EX. 3/C NO. 14 SIGNAL CABLE</p> <p> PROP. 5/C NO. 14 SIGNAL CABLE</p> <p> EX. 5/C NO. 14 SIGNAL CABLE</p> <p> EX. 7/C NO. 14 SIGNAL CABLE</p> <p> EX. 1/C NO. 6 CABLE</p> <p> EX. NO. 18 3-PR DETECTOR LOOP CABLE</p> <p> EX. MICROWAVE DETECTOR CABLE</p>
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EXISTING TRAFFIC SIGNAL CONTROLLER AND MMU TO BE RE-USED IN MODIFIED CONTROLLER CABINET.

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* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD NOT TO SCALE

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED CABLE & PHASE DIAGRAMS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 3/31/2023	DATE -	REVISIED -		ILLINOIS FED. AID PROJECT							



- NOTES:
1. THE VERTICAL CLEARANCE REQUIREMENTS BETWEEN THE BOTTOM OF THE LOWEST SIGNAL HEAD BACKPLATE AND THE HIGHEST POINT OF THE PAVEMENT ARE AS FOLLOWS: 16.0 FT (MIN.) AND 18.0 FT (MAX.)
 2. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" SINGLE LED LENSES.
 3. THE RED SECTIONS OF THE SIGNAL HEADS SHARING THE SAME MAST ARM SHALL BE LEVEL WITH ONE ANOTHER.

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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED MAST ARM DETAILS
 IL 116 & ARBOR VITAE DR./SCHMITT LN. - GERMANTOWN HILLS
 SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	20
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68H61	

FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H

Project

Date	Contract Number	Section Number	County
03-29-2023			MCDONOUGH
Marked Route Number		Municipality	

Roadway

Lane Width	#of Lanes	Median Width	I.E.S Surface Classification	O-Zero Value
12 ft	3	N/A	R3	0.07

Structure

Mounting Height	Arm Length	Set Back	Number of Luminaires (Highmast & Sign Lighting Only)
45 ft	2 ft	15 ft	4 @ 90 degrees, same direction

Luminaire

Description	I.E.S. Transverse Distribution	I.E.S. Lateral Distribution	
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	TYPE III	SHORT/MEDIUM	
Total Light Loss Factor (LLF)	BUG Rating	Shields	Dimming Protocol
0.7	U = 0	180 degree shields, where specified	0-10V

Layout

Spacing (to Nearest 5 Ft) Configuration (Opposite, Staggered, 1 Sided, or Median)
200 ft SINGLE SIDED

• Performance

Average Illuminance, E_{AVE} (fc)	Uniformity Ratio, E_{AVE}/E_{MIN}		
≥ 0.9	≤ 3.0:1		
Average Luminance, L_{AVE} (cd/m ²)	Uniformity Ratio, L_{AVE}/L_{MIN}	Uniformity Ratio, L_{MAX}/L_{MIN}	Veiling Luminance Ratio, L_V/L_{MIN}
≥ 0.6	≤ 3.0:1	≤ 5.0:1	≤ 0.3

•• Light Trespass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E_H	Max. Vertical Illuminance at ROW, E_V
30 ft	0.2 fc @ LLF = 1.0	0.2 fc @ LLF = 1.0 and 3 ft above grade

Notes

1. Set Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.
2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to roadway.
3. Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.
4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions above.
5. Lighting calculations shall be performed in one direction only.
6. Compliance with performance criteria shall be held to one significant digit.

- Unshielded photometry to be used to perform lighting calculations.
- Shielded photometry to be used to perform lighting calculations.

* FULTON, KNOX, MCDONOUGH, PEORIA, TAZEWELL, WARREN AND WOODFORD

NOT TO SCALE

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

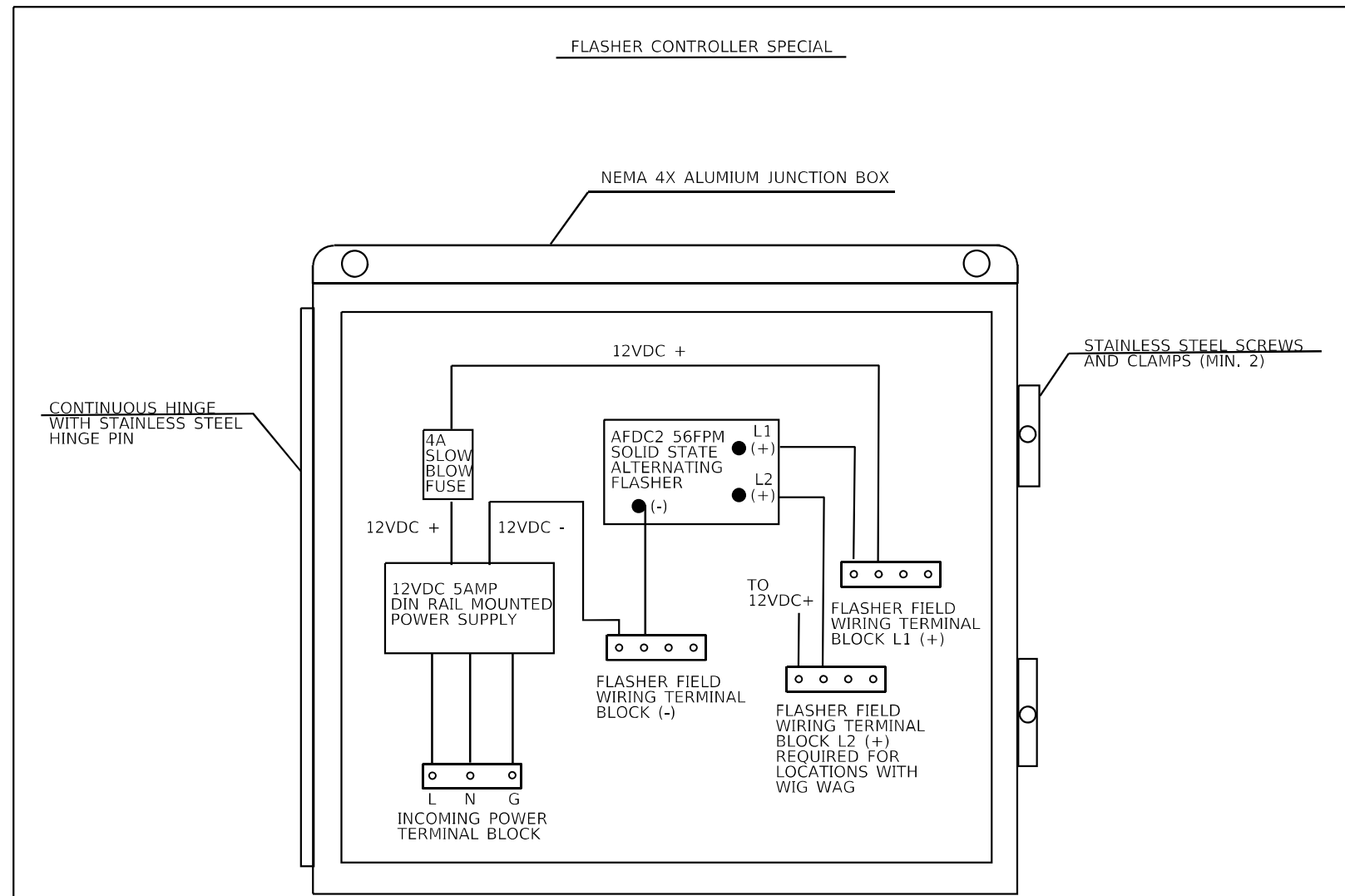
LUMINAIRE PERFORMANCE TABLE

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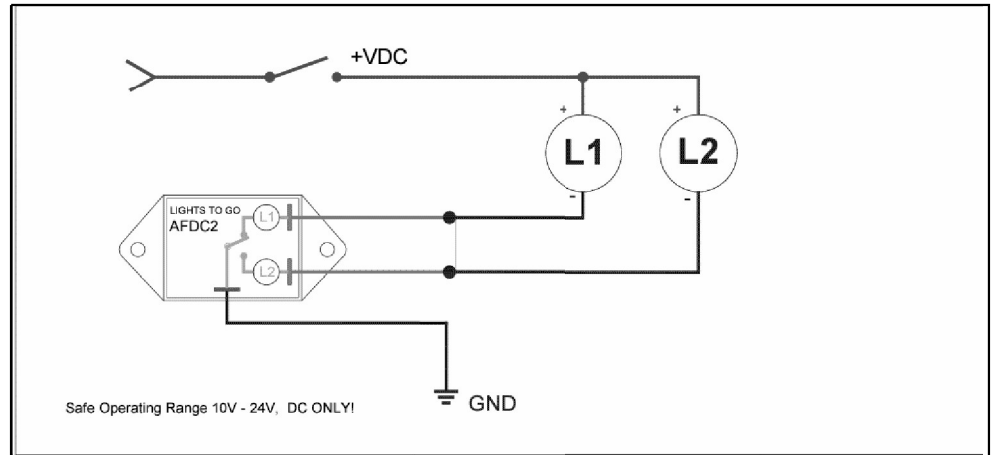
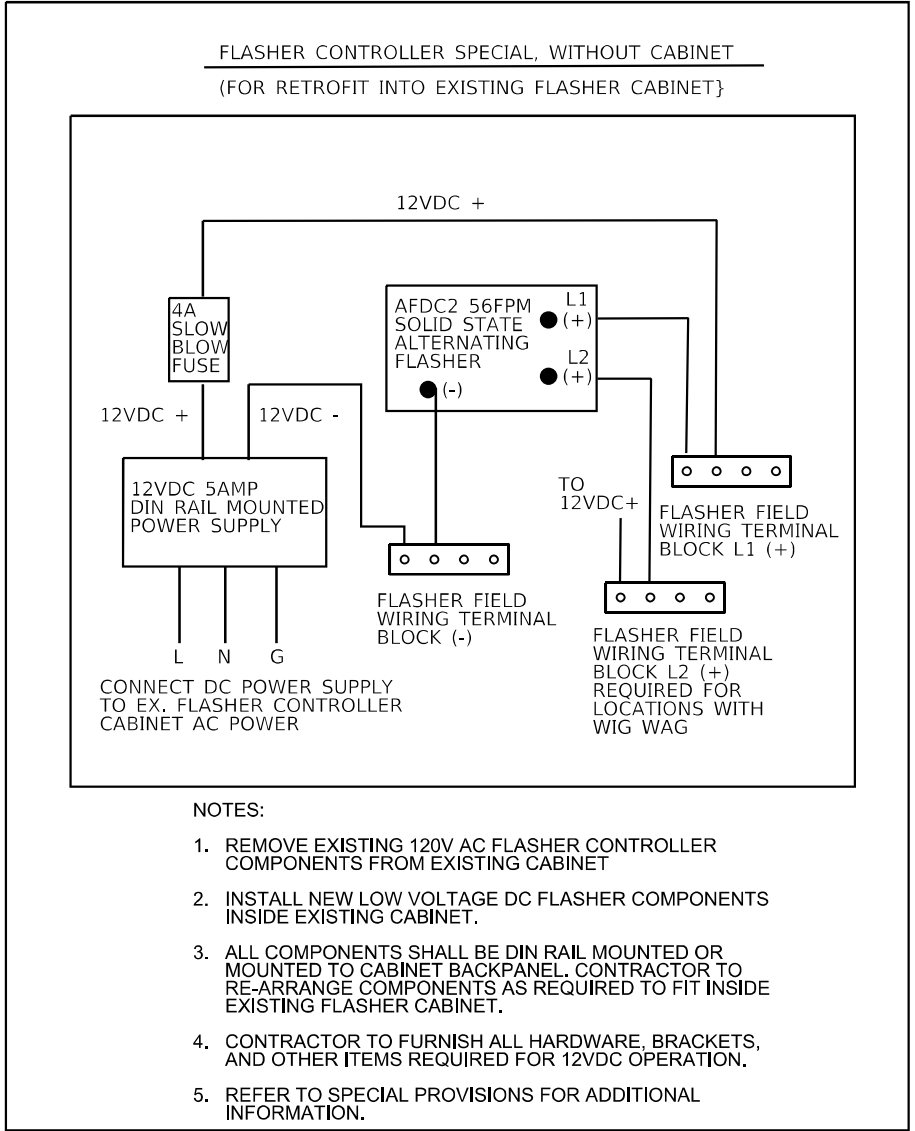
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	21
CONTRACT NO. 68H61				
ILLINOIS FED. AID PROJECT				

MODEL Path: S:\CEN\WV\W000\DESIGN\AN\Hanson.# 68H61_C4 Lighting_2023\C4 Electrical 2023 (FINAL_03-31-23).log



- NOTES:
1. FLASHER CONTROLLER TO INCLUDE NEMA 4X ALUMINUM CABINET (14"x12"x6" MIN.) OR LARGER SIZE TO ACCOMMODATE COMPONENTS (HOFFMAN A1412CHAL OR EQUIVALENT).
 2. FLASHER CABINET SHALL BE GASKETED WITH NATURAL FINISH AND BE EQUIPPED CONTINUOUS HINGE, BACKPANEL, AND PADLOCK KIT.
 3. FLASHER CABINET SHALL INCLUDE BRACKETS AND HARDWARE FOR INSTALLATION ON WOOD POLE.
 4. ALL COMPONENTS SHALL BE DIN RAIL MOUNTED OR MOUNTED TO CABINET BACKPANEL.
 5. CONTRACTOR TO FURNISH ALL HARDWARE, BRACKETS, AND OTHER ITEMS REQUIRED FOR 12VDC OPERATION.
 6. CONTROLLER COMPONENTS TO BE RE-ARRANGED AS NEEDED TO FIT INSIDE PROPOSED FLASHER CABINET.
 7. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.



2 Channel Alternating Lamp Flasher, 10 to 24VDC, 10mA Min, 4 Amp Maximum. L1 - L2 perform continuous Wig-Wag (Alternating Flash) pattern at 44 or 56 FPM +/-10%. Max Load 4A (50W @ 12VDC or 100W at 24VDC)

RED - V+ Connect to both Lamps
L1 - First Lamp Output
L2 - Second Lamp Output
BLK - GND- Power Return (-)

AFDC2 12VDC, Alternating Light Flasher

WIRING DIAGRAM
Lights To Go Inc.
208 E. Silkmitter St.
Rose Hill, KS 67133
sales@lightstogo.com
316.409.4911

www.trafficlights.com

MODEL: D4h61
FILE NAME: S:\CEN\W\W000\DESIGN\AN\Hanson# 68H61_C4 Lighting 2023\C4 Electrical 2023 (FINAL_03-31-23).dgn

USER NAME = Trevor.Hanson	DESIGNED -	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FLASHER CONTROLLER DETAIL	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D4 ELECTRICAL 2023-1	VAR. *	22	22
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68H61	

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NOT TO SCALE